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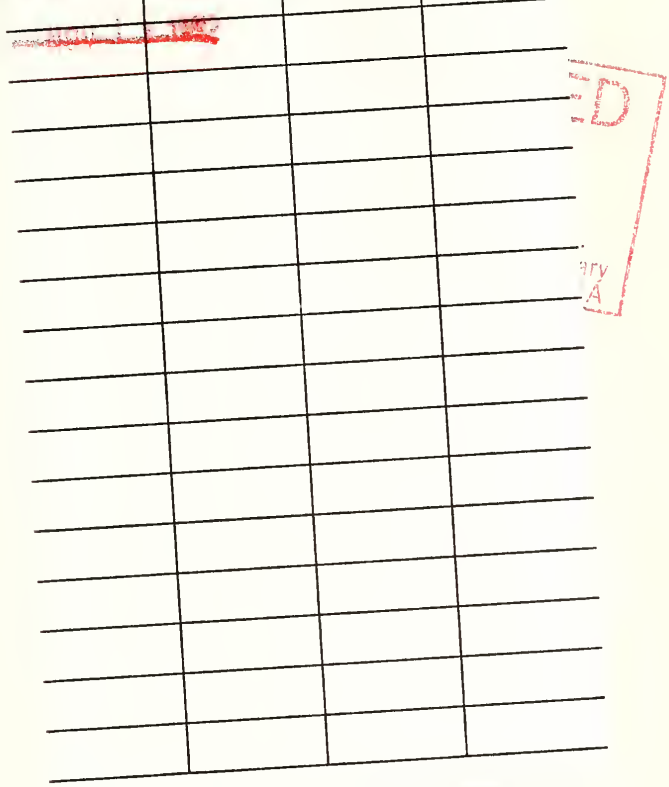

WEST GEORGIA COLLEGE

REVIEW

Volume V May, 1972 Number 1

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The purpose of this publication is to provide encouragement for faculty research and to make available results of such activity. The *Review,* published annually, accepts original scholarly work and creative writing. West Georgia College assumes no responsibility for contributors' views. The style guide is Kate L. Turabian, *A Manual for Writers.* Although the *Review* is primarily a medium for the faculty of West Georgia College, other sources are invited.

An annual bibliography includes doctoral dissertations, major recitals and major art exhibits. Theses and articles in progress or accepted are not listed. A faculty member's initial listing is comprehensive and this inventory appears as the first issue in any year. The abstracts of all master's theses and educational specialist's projects written at West Georgia College are included as they are awarded.

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A COUNTRY CALLED BLACK: SOME OBSERVATIONS ON THE RESILIENCE OF COKETOWN

By DAVID WEAVER*

The recent spate of environmental crusades in the United States has made it tempting to assume that objectionable living conditions and attempted remedies are something new in the world, a space-time problem of only late twentieth-century and uniquely American dimensions. Nothing could be further from the truth.

Geographers and other scientists with environmental concerns who are anxious to change social attitudes and to build a new order ought to be aware of the historical record. In the United States where the full impact of the Industrial Revolution on the habitat is only just being realized, this record is relatively short, but in many parts of Europe industrial urban transformations have been affecting the older rural order for several centuries. It is here perhaps more than anywhere else in the world that industrialization has taken toll of the environment, and it has done so in limited areas where its effects appear all the more striking. Among these concentrated urban areas the English Black Country has vied with the German Ruhr to become the most infamous. It is the classic ground of industrialism, the original Coketown.

The Black Country region and Birmingham its major city were built essentially on profits from iron and steel production. No other location in the world was blessed at any time with a more favorable combination of raw material sources. As an American consul in Birmingham reporting to the State Department observed, "Nature did for the Black Country all she could; indeed everything except literally building the furnaces themselves. She brought together all that was needed to set and keep them in blast. The iron ore, coal and lime—the very lining of the furnaces—were all deposited close at hand for the operation."[1] On this physical base between 1800 and 1900 the Black Country and its metal-working society mushroomed to occupy an area of approximately 200 square miles. It is true that coal and iron had been mined there for centuries, but it was steam power that gave the district its distinctive character, made it a phenomenon, and caused the populations of towns like Wolverhampton, Walsall, Tipton, West Bromwich and Smethwick to increase seven or eight times in three generations. By the late nine-

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[1] E. Burritt, *Walks in the Black Country and its Green Borderland.* (London: Sampson Low, Son, and Marston, 1868), p. 160.

teenth century the area was the major seat of pig-iron production and the hardware center of the country producing about one-quarter of the total British pig-iron output and one-third of the finished wrought iron. Since that time for a variety of reasons the primary metal industry has declined into insignificance, but the closing down of the multitude of blast furnaces and refineries left as its legacy a host of small metal-using factories which have provided the nucleus for continued industrial expansion down to the late twentieth century.

The rapid development of the Black Country converted an agricultural and handicraft society within a lifetime. There was a population explosion as job opportunities beckoned the dense rural population of surrounding areas. The in-migration was much greater than the ability of the construction industry to cope with it, resulting in the classic process of squatting and slumdwelling. The environment quickly deterioted. The landscape became, according to Burritt "marred, scarred, and fretted and smoked to death, day and night, year and year, even on Sundays."[2] Pit head gear multiplied as did factory chimneys, while waste heaps, quarries, canal cuttings and rail viaducts one by one obscured the natural contours of the land and confused and dirtied its drainage. Exploitation by industry of resources and manpower outpaced the ability of the law to police it. The demands of the burgeoning population for public services far outran the ability of government to provide them. Political power was in the hands of the few rather than the many.

By the mid-nineteenth century the Black Country was a melting pot of social deprivation and in terms of its physical environment the exact opposite of Wordsworth's "natural piety." It was to all observers something very new to the world. For some it was a phenomenon to be marvelled at, the ultimate in industrial progress. As such it was the mecca of the European and American business communities. It was a culture hearth exporting its valued technology around the globe and spawning in far away places like Alabama descendants in its own image. For more socially conscious observers, however, it raised different feelings. By the mid-nineteenth century expressions of distaste and disapproval were beginning to find their way into print, and thereby into the Black Country conscience. Throughout the nineteenth century, writers of greater and lesser prominence castigated the Black Country and those responsible for developing it.

For Charles Dickens, as for many others, the Black Country was indeed a new England, but it was new and different because it was frightening, an affront, and a threat. In conducting Little Nell and her grandfather through the Black Country, he wrote:

> Advancing more and more into the shadow of this mournful place, its dark depressing influence stole upon their spirits and

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[2] *Ibid.*, p. 164.

filled them with a dismal gloom. On every side and as far as the eye could see into the heavy distance, tall chimneys crowding on each other and presenting endless repetition of the same dull ugly form, which is the horror of oppressive dreams, poured out their plague of smoke, obscured the light, and made foul the melancholy air.[3]

Some twenty years after Dickens wrote the *Old Curiosity Shop*, a more reflective and critical writer saw the Black Country for the first time. Henry Adams, on his way to join his father, the American minister at the Court of St. James, wrote of it years later in his autobiography:

Then came the journey up to London through Birmingham and the Black District, another lesson which needed much more to be rightly felt. The plunge into darkness lurid with flames; the sense of unknown horror in this weird gloom which never existed before, except in volcanic craters; the violent contrast between the dense smoky impenetrable darkness, and the soft green charm that one glided into as one emerged—the revelation of the unknown society of the pit—made a boy uncomfortable... the boy ran away from it, as he ran away from everything he disliked.[4]

Another American, J.G. Kohl, wrote of Birmingham in 1844 that:

The town covers a space of about nine English square miles, the greater part of this space occupied by a mass of small, uniform and mean looking houses inhabited by the work people. A large portion of Birmingham might be described as a wilderness of houses; all equally ugly, an ungainly mass, unbroken by a single building of pleasing exterior.[5]

The criticisms of these outside observers, as well as the disaffection of some Black Country inhabitants, were responsible after about 1880 for attempts by industrialists to alleviate basic problems. The Black Country, and particularly Birmingham pioneered the concept of subsidized public housing for the poor and universal free education. It was from the beginning involved in the town and recreational planning movement of the early twentieth century, and accepted a number of changes in its political structure which were socially more equitable and economically more efficient. More attention was given to building design, to land reclamation, and to air and water pollution problems.

In many ways the pressures of radical thinking helped to change

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[3] Charles Dickens, *The Old Curiosity Shop*. (London: McMillan and Co., 1892), p. 314.

[4] Henry Adams, *The Education of Henry Adams, An Autobiography*. (Boston and New York: Mifflin Co., 1918), pp. 72-73.

[5] J. G. Kohl, *England and Wales*, (Reprint of 1844 edition; London: Frank Cass & Co., 1968), p. 8.

the geography of the Black Country. In the late twentieth century, many aspects of the area seem a far cry from the nineteenth century image. Even so, it is doubtful if the desires of many of those who strived for change over the years have been nearly satisfied. The prevailing impression of a visitor to the Black Country is still of a derelict land, slag heaps and pit mounds, stagnant pools of brown water in hollows, abandoned railways, murky canals that carry little traffic but are apparently without end, piles of scrap, squalid housing, black factory buildings that are sometimes half ruins, smoking chimney stacks set in seemingly waste spaces. In many locations, the Black Country still looks and smells like an enormous battlefield, the gashed and wounded earth of which has not healed. Socially, although there appears to have been material progress in living conditions, there is widespread poverty. Racial conflict and discrimination are worsening problems. Since modern concepts of social welfare began to appear a century ago, some progress toward human well-being has been made in the Black Country, but it is a sobering thought that despite these concepts and their continual expression, there has been so little real change in many aspects of life.

What are the reasons for this? The outstanding one seems to be that a social and economic landscape, once generated, has an inbred conservatism, a veriety of geographical inertia. The better developed and more complex in function an area becomes, the less is its ability to accept extensive change. Decision makers proliferate as do the numbers of people who must accept decisions. Investments once made in land and physical structures can only be re-allocated at great costs to the general society. In the Black Country today, a number of industrial establishments date back in the same site to the eighteenth century and a multitude to the nineteenth. Houses which were built in the nineteenth century are gradually being replaced, but much land has been proscripted to residential development by previous industrial activity and the high costs of land reclaimation. The communications network which binds the society together reflects the traffic requirements of the nineteenth century, despite great efforts to make it otherwise. All of these varied elements have been reshaped in varying degrees in response to social pressures, but none of them approximate a plan which might be generated from modern principles of social welfare.

A lesser, but nonetheless significant, reason lies in the innate conservatism of the region's occupants. For most of these people the campaigns which raised them above the economic and intellectual breadline in the nineteenth century are forgotten. They have little time for anything outside their family lives, particularly intellectual debate on the improvement of their lot. The approximately three million people who live there do not expect anyone to come to the Black Country to admire the scenery, but it is the first place they think of when they think of England, and they are not unduly worried that it is black. The quality of environmental perception, as geographers have been keen to show,

depends not only on what is to be seen but also on how well eyes have been taught to see. In the Black Country, there has been a great deal of teaching, but it appears not quite so much learning. The majority of the factory workers seem, from election evidence, to appreciate personal costs much better than they do projected public benefits.

Added to this widespread lack of concern for radical change, there is a much smaller, but nonetheless significant, emotional preservationist attitude alive in the Black Country. This views the conventionally ugly industrial landscape as one of remarkable aesthetic beauty, a sentiment perhaps best expressed by the respected poet W.H. Auden. His view of the Black Country as expressed in his "Letter to Lord Byron" was that:

> On economic, health, or moral grounds
> It hasn't got the least excuse to show
> No more than chamber pots or otter hounds
> But let me say before it has to go,
> It's the most lovely country that I know;
> Clearer than Scafell Pike, my heart has stamped on
> The view from Birmingham to Wolverhampton.[6]

Like most preservationist attitudes, this one is a force to be reckoned with.

What message does all of this hold for radical scientists and their intention to promote social welfare? First, it suggests that they need to recognize the innate resilience of the situations they are trying to reform, an acceptance which may be alien to their natures. The existing industrial urban landscape is a panorama of fixed assets, costly to the public purse to manipulate, and often presenting considerable problems of reconstruction. The prevailing socio-cultural attitudes of an urban region reflect environmental perceptions which may be far removed from those generated by the logic of the social scientist. As such, they provide a sizeable communications problem between the salesman and his market. For these two reasons alone, the land use and environmental adjustments necessary for increased social comfort are extremely unlikely to be implemented overnight, and as cities continue to grow in size, the rate of internal change will probably become less. The present will likely be as stubborn as the past and unless they take regard for this fact, radical social scientists of all persuasions may experience more personal and professional frustrations than they bargain for.

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[6] W. H. Auden, *Collected Longer Poems*, (New York: Random House, 1969), p. 46.

CHOLESTEROL: METHODS OF CONTROL

By JACK L. GROGAN*
W. GLENN ESSLINGER**

Atherosclerosis, a lesion in medium and large sized arteries, is characterized by deposits of yellowish plaques containing cholesterol and fatty material. It is a pathological condition that gives rise to many coronary, cerebrovascular, and other vascular diseases. It is the leading cause of death in many countries, and in North America and Europe causes more death in middle-aged and elderly persons than all other diseases together.[1]

Atherosclerosis can cause vascular diseases in several ways: (1) it can corrode the arterial wall to the point of eruption from the pressure of the blood inside, leading to severe hemorrhage; (2) it can, when vascular wall damage has been done, stop blood circulation by a tremendous growth of repair tissue; or (3) it can, as a result of radical changes in the arterial walls, cause a sudden blood clot within a diseased artery, stopping blood flow through it.[2]

Hypercholesterolemia (a high cholesterol level in the blood) plays a significant role in atherosclerosis, as demonstrated by the accumulation of cholesterol in atherosclerotic aortas. Atherosclerosis has also been experimentally induced in animals on high cholesterol diets.[3] Consequently, this cause-and-effect relationship of high cholesterol levels to atherosclerosis has resulted in research attempting to influence tissue and blood levels of cholesterol.

There are basically two methods for influencing cholesterol levels. The amount of cholesterol obtained in the diet can be decreased or the synthesis of cholesterol in the body can be inhibited to some degree. Cholesterol-lowering diets are currently the most popular means of decreasing cholesterol and presumably retarding atherosclerosis in man. The efficacy of this diet has not been universally accepted, because cholesterol is involved in the production of various hormones in man, and such a diet could conceivably affect the production of these hor-

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[1] Lewis S. Goodman and Alfred Gilman, *The Pharmacological Basis of Therapeutics* (New York: The MacMillan Co., 1965), p. 754.

[2] Paris Constantinides, *Experimental Atherosclerosis* (New York: Elsevier Publishers, 1965), p. 1.

[3] David Kritchevsky, "Effects of High Cholesterol Diet on Animals," *Lipid Pharmacology*, edited by R. Paoletti (New York: Academic Press, 1964), pp. 62-66.

mones. However, no ill effects have ever been observed with cholesterol lowering diets. Dietary control of cholesterol is only moderately successful, for cholesterol is continuously produced in the body. If certain amounts are not present in the diet, the body increases its production.

The low cholesterol diet[4] currently prescribed involves: decreasing the total amount of fat, decreasing the amount of solid fat (ordinary fat in meat, butterfat, hydrogenated vegetable oils and hydrogenated margarines), and decreasing the amount of cholesterol-rich food (eggs and egg products, whole milk and liver). The diet also involves a slight increase in the amount of liquid fats [liquid (nonhydrogenated) vegetable oils, such as corn oil, cottonseed oil or safflower oil].

A typical low cholesterol diet should include skim milk (liquid or powdered), chicken, turkey, veal, lean cuts of beef, lamb, or pork (four times per week or less), fish and other seafood (ideally, five times per week), and liver no more than once per week. Fried foods should be avoided, along with butter, whole milk, ice cream, margarine, cheese, shortening rich foods, *i.e.*, oily salad dressing, nuts, peanut butter (not the creamy or hydrogenated type) and corn oil or cottonseed oil margarine. Vegetables, fruits, cereals, and starches are acceptable on a low-cholesterol diet. Even egg whites are allowed in angel food cake and whole milk in coffee in moderate amounts.

Since dietary control of cholesterol is only moderately successful, other methods of control are being investigated. A number of compounds have been synthesized which have cholesterol-lowering effects in animals. Some of these compounds are of great interest in the medical profession and can be classified as follows:[5] drugs favoring degradation of cholesterol; drugs increasing the bile excretion of cholesterol; drugs increasing the intestinal absorption of cholesterol; and drugs that inhibit the synthesis of cholesterol in the body.

Drugs favoring the degradation of cholesterol. The main pathways for the elimination of cholesterol are degradation to bile acids and excretion of cholesterol in feces. If, through research, a compound could be found that would increase this rate of conversion of cholesterol into bile acids, an excellent way to treat hypercholesterolemia would be available. Unsaturated fats have been shown to increase the rate of conversion of cholesterol into bile acids resulting in a reduction of serum cholesterol. This lowering effect offsets the fact that unsaturated fats sometimes favor the intestinal absorption of cholesterol. Various thy-

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[4] F.E. Abbo and P. Meyer, "Effect of Cholesterol Lowering Diet on Production of Adrenal Cortical Hormones in Man," *American Journal of Clinical Nutrition,* XIX (1966), 232.

[5] P. Preziosi, "Drugs Affecting Lipid Metabolism," *Lipid Pharmacology,* edited by R. Paoletti (New York: Academic Press, 1964), p. 415.

roid hormones[6] and their analogs have also shown cholesterol-lowering effects due to increased stimulation of cholesterol degradation.

Additions to the diet of metal ions such as iron (III), cobalt (II), and nickel (II) have also been reported to increase the rate of conversion of cholesterol to bile acids.[7]

Drugs increasing the bile excretion of cholesterol. Cholesterol can be lowered if the bile flow is increased without dilution of bile constituents, *i.e.* bile salts. Artichoke extracts (*Cynara Scolymus*) have been reported to lower serum cholesterol by increasing the bile excretion. Cynarin, the active constituent of artichoke extracts, has been shown to lower cholesterol without dilution of bile. Unlike all other known cholesterol lowering agents, pharmacological tests with Cynarin have shown no undesirable side effects. In every case the administration of Cynarin was followed by a decrease in total cholesterol levels. The action of Cynarin in atherosclerotic patients is a radical change toward the normal serum cholesterol pattern.[8]

Cynarin shows useful cholesterol lowering properties due to the increased excretion of cholesterol by way of bile. Unfortunately, Cynarin must be administered in high doses for long periods of time in the treatment of deranged cholesterol metabolism and atherosclerosis.[9] This factor constitutes a distinct disadvantage. However, Cynarin could be useful as a model for analogous compounds which are both non-toxic and highly potent, and have few or no side effects.

Drugs decreasing intestinal absorption of cholesterol. Some drugs lower plasma cholesterol by antagonizing the absorption of cholesterol from the intestinal lumen. The most important types of these drugs bind bile acids in the intestine and favor fecal excretion of cholesterol. MK-325, a resin, has been reported to bind bile acids in the intestinal tract and thus favor their fecal excretion.[10] A marked reduction of cholesterol levels has been observed. The required dosage is extremely high, about 25 grams per day, which constitutes a serious disadvantage.

Drugs that inhibit the synthesis of cholesterol in the body. A large number of compounds have been reported that inhibit the synthesis of

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[6] B. Blank, F. Pfeiffer, and C. Greenberg, "Thyromimetics: The Synthesis and Hypocholesterolemic Activity of B-Diethylaminoethyl Esters of Iodinated Thyroalkanoic Acids," *Journal of Medicinal Chemistry,* VI (1963), 560.

[7] M. Whitehouse and D. Kritchevsky, "Effect on Cholesterol of Metal Ions in the Diet," *Journal of Atherosclerotic Research,* II (1962), 47.

[8] L. Preziosi, E. Marmo, and E. Miele, "Effects of Single or Repeated Treatment with Several Anti-Cholesterolemic Compounds on Biliary Excretion of Cholesterol," *Biochemical Pharmacology,* V (1960), 251-62.

[9] M. Mancine, P. Oriente and L. D'Andrea, *Lipid Pharmacology,* edited by R. Paoletti (Amsterdam: Elsevier Publishers, 1961), pp. 533-37.

[10] D. Tennent, H. Siegal, M. Zanetti, G. Guron, W. Ott, and F. Wolf, "Plasma Cholesterol Lowering Action of Bile Acid Binding Polymers in Experimental Animals," *Journal of Lipid Research,* I (1959-60), 469-73.

cholesterol in the body. Some of the most potent compounds such as SKF-525A[11] and Atromid-S[12] have been shown to produce a lowering of plasma cholesterol. Serious side effects, however, have been observed with these compounds. Inhibition of cholesterol in the body can cause serious consequences in overall steroid metabolism and subsequent hormonal balance.

In summary, control of blood cholesterol or lipid levels is now one of the main goals of therapeutic research. Dietary control of cholesterol is only moderately successful. Previous attempts at chemotherapy (chemical therapy) have been empirical and confined largely to the control of cholesterol. There are few effective agents and most of these produce marked side effects. Thyroid hormone analogs, agents capable of enhancing cholesterol breakdown, have to be discarded for that reason. Some agents are effective in animals but not in man. Ingestion of unsaturated fatty acids may actually increase fat absorption. Alteration of cholesterol levels by agents that bind bile acids is not of significant therapeutic value due to the large dosages necessary. Thus, a therapeutically valuable cholesterol lowering agent remains to be found. Increased excretion of cholesterol by way of bile acids would be of greater value in lowering cholesterol levels than inhibition of its synthesis since inhibition of cholesterol can cause serious effects on hormonal balance. For this reason, analogs of Cynarin might prove useful as cholesterol lowering agents.

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[11] W.L. Homes, *Lipid Pharmacology,* edited by R. Paoletti (New York: Academic Press, 1964), pp. 153-54.

[12] J.M. Thorp and W. Waring, "Modification and Distribution of Lipids by Chlorophenoxyisobutyrate," *Nature* (London), CXCIV (1962), 948.

"OPERATION MAGIC FIRE": GERMANY'S INVOLVEMENT IN THE SPANISH CIVIL WAR

By MELVIN STEELY*

On July 24, 1936, the Foreign Ministry in Berlin received a telegram sent six days earlier from the German charge D'affaires in Spain, Hans Voelckers. The report described a series of revolts that had sprung up throughout Spain the previous day. The opening sentence of the brief description stated, "beginning yesterday, the expected military revolts have broken out all over Spain."[1] The word "expected" leaves the door open to speculation concerning the extent of German involvement in the planning of these revolts.

Were the Germans involved in the revolts themselves, or were they privy to information concerning the dates of the revolts and thus prepared to supply and aid the rebels upon the commencement of hostilities? Present available information would indicate that neither of these possibilities was the case. It is the purpose of this study to determine why and how the Germans became involved in the Spanish conflict and to ascertain the extent of their involvement.

One assumption, formed around the word "expected" in Voelckers' telegram, is that General Francisco Franco had reached an understanding with both Germany and Italy prior to the outbreak of hostilities on July 18, 1936. This understanding, seemingly reinforced by the activities of rebel leaders and the German and Italian governments shortly after that date, would guarantee Nazi and Italian transport aircraft to Franco to enable him to ferry his troops across the Strait of Gibraltar in support of General Emilio Mola who would lead the revolt in Northwest Spain.[2]

Certainly the aircraft, requested by Franco as early as July 22, were being supplied by the end of that month.[3] The problem, however, is whether the decision to supply the Spanish rebels was made by the Nazis before or after the revolts began. Furthermore, we need to ask what factors influenced such a decision.

Germany had strategic and economic interest in Spain and had been active in stirring up various groups in that country for a number of

*Assistant Professor of History, West Georgia College.

[1] *Documents on German Foreign Policy, 1913-1945* (11 vols.; Washington: U.S. Government Printing Office, 1950), Series D, III, 3.

[2] Arthur H. Furnia, *The Diplomacy of Appeasement: Anglo-French Relations and the Prelude to World War II, 1931-1938* (Washington: University Press of Washington D.C., 1960), p. 208.

[3] *Ibid.*

years.[4] German capital was widespread in the Spanish economy and a rearming Germany needed the mineral resources, especially mercury, zinc, copper, iron ore, and tungsten, that Spain could provide. The Spanish conservative press was used by the Germans in Spain to spread their ideas—ideas which, aided by numerous Nazi agents in the country, found a substantial following among the Spanish aristocracy, the large landholders, the Church leaders, the Carlists, and the Army officers.[5]

The Nazis presented more than ideas to these Spaniards. Five months prior to the July revolts General José Sanjurjo visited Berlin and was escorted by Admiral Wilhelm Canaris, Chief of Military Intelligence, on a tour of German arms factories. When this future rebel general left Germany he had a promise of Nazi support for the future insurrection against the Republic, although no mention of dates is recorded. It was on this visit that the rebels received the promise of transport aircraft in the event that the Spanish fleet remained loyal to the Republic. Had the fleet joined the rebels, it would seem that neither the Spaniards nor the Germans desired Nazi support, since the assumption was that the revolt would be a "quick and easy success." The Spanish conspirators hoped and, seemingly, fully expected to be able to carry out the revolt by themselves because of the political apathy or incapacity of the people.[6]

From the available evidence it would seem that the German government had a general awareness of a proposed military revolt in Spain in the near future, but was not informed of the specific details. Thus the telegram from Voelckers to the Foreign Ministry in Berlin probably referred only to expectations held by the Nazis of such a revolt. It does not necessarily indicate that Berlin was involved in the planning and execution of the insurrection itself.

The uprising was a purely Spanish affair that was basically an army revolt against the Spanish Popular Front. No foreign power was behind the insurrection, but when the government did not collapse as expected, each side sought supplies and aid from outside sources.[7]

Once the revolts had begun, a decision had to be made concerning

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[4] Dante A. Puzzo, *Spain and the Great Powers, 1936-1941* (New York: Columbia University Press, 1962), pp. 44-47.

[5] *Ibid.*, p. 4. See also Emile Burns, trans. *The Nazi Conspiracy in Spain* (London: Victor Gollancz Ltd., 1937), pp. 24-57, and Patricia A.M. van der Esch, *Prelude to War: The International Repercussions of the Spanish Civil War, 1936-1939* (The Hague: Martinus Nijhoff, 1951), pp. 25-26.

[6] Puzzo, *Spain and the Great Powers,* pp. 45-47. See also J. Alvarez del Vayo, *Freedom's Battle,* B.B. Brooke, trans, (New York: Knopf, 1940), pp. 10, 50-51.

[7] C.H. Black and E.C. Helmreich, *Twentieth Century Europe: A History* (2nd. ed., re; New York: Knopf, 1961), pp. 501-2. See also David C. Cattell, *Communism and the Spanish Civil War* (Berkeley: University of California Press, 1955), p. 44.

the promise made to the rebels in February. Dr. Karl Schwendemann, Counselor in the German Embassy in Madrid, reported to the Foreign Ministry on the conditions in Spain as of July 23, giving a fairly balanced picture of the advantages and disadvantages of both sides. The report indicated that the civil war would probably be of long duration and warned against the possibility of a Marxist take-over of the Spanish government which would strengthen the Franco-Russian bloc.[8]

Under these conditions it would seem that German aid to the rebels would be desirable. Hans Dieckhoff, acting head of the Foreign Ministry, and Constantin Neurath, the Foreign Minister, advised against such aid, indicating that it would be impossible to hide it. It would surely become known and then result in serious consequences for the German colony in Spain as well as for German merchant and naval vessels in the area since the Republicans controlled the Navy. It should be noted that the Foreign Office's influence on German policy was continually diminishing during this period. Ribbentrop, the *Fuehrer's* Special Ambassador, and Ernst W. Bohle, Nazi Gauleiter and head of the N.S.D.A.P.'s *Auslandsorganisation* (Foreign Organization), both enjoyed positions in reality superior to that of von Neurath. The Wilhelmstrasse had been declining in importance since the appointment of Franz von Papen as Minister to Vienna in 1934 following the murder of Austrian Chancellor Engelbert Dollfuss. The *Auslandsorganisation*, or *AO*, grew in importance since it served to bypass official diplomatic channels and was a clearing house for propaganda and information gained by Nazi agents stationed abroad. In fact, "It is not too much to say that the policy adopted by Germany in Spain was an *AO* policy."[9]

The Nazi party in Spain and Admiral Canaris, head of the Military Intelligence Bureau agreed with the *AO* position. Canaris described Franco as a tested officer deserving full trust and support.[10] Canaris received support from Hermann Goering, chief of the Luftwaffe, who desired the Spanish conflict to be used as a testing ground for his air force. German aid was also necessary, he indicated to Hitler, in order to prevent the spread of Communism.[11]

Another motive behind the decision to aid Franco was that of stopping the spread of Communism in the West before it started. A Bolshevik takeover in Spain would flank Germany and Europe with Communist countries and would result in a "shifting of the European

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[8] *Documents on German Foreign Policy*, III, 5-7.

[9] Gordon A. Craig and Felix Gilbert, eds., *The Diplomats, 1919-1939* (Princeton: Princeton University Press, 1953), pp. 427-29.

[10] Hugh Thomas, *The Spanish Civil War* (New York: Harper Colophon, 1963), p. 228.

[11] International Military Tribunal, *Secretariat, Trial of the Major War Criminals Before the International Military Tribunal, Nuremberg, 14 November 1945—1 October 1946* (42 vols.; Nuremberg: m.p., 1948), X, 260-81.

equilibrium."[12] For the first time the struggle between Fascism and Communism was brought into the open on the battlefield. The Spanish Civil War became a battleground of rival political ideologies. It is probable, however, that the ideological forces were more meaningful to the foreign volunteers and auxiliaries than to the Spaniards, or for that matter to the Nazis. Hitler again raised the 'red scare' banner, a helpful device in times past, and presented himself as the bulwark against Bolshevism.[13] It would not be going too far to say that the *Fuehrer* considered ideology only a facade, albeit one he used very well.[14] His actions in August 1939 seem to support this contention.

On July 24 two rebel officers arrived in Berlin accompanied by two German members of the *AO* with letters for the *Fuehrer* from General Franco. Franco requested ten Junker transports to move his African troops over to Spain. He was, of course, willing to pay for such aid. At this point Hitler did not seem to have made up his mind concerning aid to Franco. He sent for the two *AO* members, Johannes Bernhardt and Adolf Langenheim, to join him in Bayreuth. The two met with him on July 26, and after conferring with Goering and General Werner von Blomberg, War Minister and Commander in Chief of the Wehrmacht, the *Fuehrer* decided to back the rebels, and support was agreed on in principle.[15] It is significant that Neurath was absent from this meeting and that the decision to aid Spain took him completely by surprise. The Foreign Office did not object to activity in Spain but it did against a full commitment there. Exploitation of the Spanish situation was desirable but not if it sharpened the resistance of the Western Powers and led to a war. Neurath and his officers were backed up in this position by senior General Staff officers.[16]

Despite this opposition Germany was committed to the support of the rebels. Goering listed two major factors influencing Hitler to make the decision for support: the isolation of France, and the establishment

[12] Van der Esch, *Prelude to War,* p. 12. The danger of a 'red take-over' is highly questionable since there were only sixteen Communists in a Cortes of 473 and there were no Communists in the government. Communist strength grew as the war progressed but there was no strong threat of a take-over at its outbreak. See Herbert L. Matthews, *The Yoke and the Arrows* (New York: George Braziller, 1957), pp. 11-12, and Cattell, *Communism and the Spanish Civil War,* pp. 208-10.

[13] Mary Ann Deren, *Non-Intervention in the Spanish Civil War, 1936-1939* (unpublished M.A. thesis, Dept. of History, Vanderbilt University, 1949), pp. 89-90.

[14] Frederick L. Schuman, *Durope on the Eve: The Crises of Diplomacy, 1933-1939* (New York: Knopf, 1939), p. 267.

[15] *Documents on German Foreign Policy,* pp. 10-11. See also Thomas, *The Spanish Civil War,* p. 228; Alan Bullock, *Hitler, A Study in Tyranny,* (New York: Bantam Books, 1961), p. 302; and Puzzo, *Spain and the Great Powers,* pp. 60-61.

[16] Craig and Gilbert, *The Diplomats,* pp. 429. See also Walter Goerlitz, *The German General Staff, 1657-1945,* Brian Battershaw, trans. (New York: Praeger, 1959), p. 306.

of bases on the Iberian Peninsula to further control the Mediterranean.[17] The first would not be challenged, but there is some reasonable doubt regarding a Nazi desire to set up bases on Spanish soil. Such bases would have the effect of bringing Spain into a conflict on the side of the Axis and thereby open them up to invasion by Allied Forces. These bases would also require troops and materials for occupation, and further expense certainly was not to be sought. In the event of an Allied invasion and take-over of Fascist Spain, a moral blow would be suffered by the Axis Powers.

It would have been much better for Germany if Spain, under Fascist control had maintained a position of benevolent neutrality, thus securing one front from invasion and at the same time being able to provide the Reich with needed iron and zinc ore. A neutral Fascist Spain on France's southern flank would have been valuable as a threat to that country if not as a militant ally of the Nazis.

Some historians, however, feel that Hitler was depending on future naval and air bases in Spain and on the Canary Islands in case of war. Patricia van der Esch notes that Hitler had counted on the destruction brought on by the war which forced Franco into a neutral position and thus was enraged in 1941 when the Spanish dictator refused to cooperate in a plan to take Gibraltar from behind.[18]

It is clear that the Nazis used the Spanish conflict as a proving ground to test their new weapons and to sharpen the team cooperation of the Luftwaffe and the artillery and Panzer units. This was advocated by Goering on July 24 and put to good use in the training of officers and non-commissioned officers of the various units.[19] In his testimony before Nuremberg Tribunal Goering describes the Luftwaffe's participation thus:

> With the permission of the *Fuehrer*, I sent a large part of my transport fleet and a number of experimental fighter units, bombers, and anti-aircraft guns; and in that way I had an opportunity to ascertain, under combat conditions, whether the material was equal to the task. In order that the personnel, too, might gather a certain amount of experience, I saw to it that new people were constantly being sent and others recalled.[20]

Two other reasons, closely connected, might be listed. The Civil War presented Germany with the chance to step into international af-

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[17] B.N. Dzelepy, *The Spanish Plot* (London: P.S. King and Son, 1937), pp. 6, 10-11.

[18] Van der Esch, *Prelude to War*, pp. 11-12. See also Furnia, *The Diplomacy of Appeasement*, p. 207, and Thomas, *The Spanish Civil War.*, p. 229.

[19] Furnia, *The Diplomacy of Appeasement*, p. 207. See also Thomas, *The Spanish Civil War*, p. 228, and van der Esch, *Prelude to War*, p. 12.

[20] *Trial of the Major War Criminals*, IX. p. 281. See also Robert G. Colodny, *The Struggle for Madrid*, (New York: Paine-Whitman, 1958), and *The Spanish Civil War*, pp. 229-31.

fairs as a world power for the first time since the end of World War I. Also, in future bargainings over colonial empires, control over Spain would be a valuable tool to be used to obtain for Germany a share of any colonial territory that might be divided or otherwise disposed of.[21]

Hitler, himself, gave a number of reasons for his decision. One of the first reasons in addition to the desire to stop the spread of Communism, was that conflict in Spain would serve to distract the democracies' attention from the "center of peril"—the Danube Basin and Czechoslovakia.[22] If this be true, then it would certainly lend weight to the claim that the *Fuehrer* planned action in that area and that his policy was not guided simply by impulse.

Another explanation Hitler gave, this time to his generals, was that intervention was a diversionary tactic to distract the attention of the Western Powers to Spain and thus enable Germany to continue her rearmament unobserved and unrestricted.[23] This statement, however, seems odd since in the summer of 1935 the Anglo-German Naval Agreement had been signed, doing away with the Versailles restrictions and allowing the Germans a navy with tonnage set at 35% that of the British Navy.[24] In addition, Hitler had announced, via radio, on March 16, 1935, that the Third Reich was burying the Versailles restrictions on her military with a decree providing for universal military service, amounting to roughly half a million men. France and Britain had acknowledged this announcement with a protest and nothing more.[25] Even Hitler could not have doubted that the Western Powers were aware of Germany's rampant rearmament program by 1936.

It now seems clear that Hitler, did have his eye on the enemy across the Rhine when he made the decision to aid Spain. He hoped that such action would have the effect of isolating France. It would do harm to the Franco-Russian agreements; France would be faced with another Fascist power on her borders; the Anglo-French agreements might be upset, and the conflict in Spain was certain to accelerate the civil strife in an already unsteady France.[26]

It does not stretch the imagination to assume that the *Fuehrer* was considering the effect the Spanish war would have on his counterweight to the south, Mussolini. At dawn on March 7, 1936, a small

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[21] van der Esch, *Prelude to War*, p. 12.

[22] Arnold Toynbee, *Survey of International Affairs, 1937* (London: Oxford University Press, 1938), II, p. 186-89.

[23] Thomas, *The Spanish Civil War*, p. 228.

[24] William L. Shirer, *The Rise and Fall of the Third Reich* (New York: Simon and Schuster, 1960), p. 287-89. See also Furnia, *The Diplomacy of Appeasement*, pp. 154-55.

[25] Shirer, *The Rise and Fall of the Third Reich*, pp. 282-85.

[26] *Ibid.*, p. 297. See also Furnia, *The Diplomacy of Appeasement*, p. 207 and Cattell, *Communism and the Spanish Civil War*, p. 76.

force of Nazi troops (30,000)[27] marched across the border into the demilitarized Rhineland and reoccupied it for the Third Reich. This move had "emasculated at one stroke the Franco-Czech and the Franco-Russian alliances."[28] Although the Abyssinian invasion had set up a breach between Italy and the Western Powers, the gap was not so wide as to prevent them from drawing closer when faced with this new threat on the Rhine. German-Italian relations in the Spring of 1936 were less than encouraging to Berlin. The Fascist troops guarding the Brenner Pass seemed as strong as ever, and it appears after the Rhineland *coup,* Mussolini had reinforced them in anticipation of another Nazi attempt to take over Austria. In fact, on May 18, the United States Ambassador, William C. Bullitt, was told by Neurath that "demonstrations of friendship between Germany and Italy were mere demonstrations without basis in reality." He also indicated the possibility of future conflict with Italy over Austria when he stated that

> . . . at the present time he could see no way to reconcile the conflicting interest of Germany and Italy over Austria. For the moment Germany would not encourage the Austrian Nazis because 'until the German fortifications have been constructed on the French border, an involvement of Germany in war with Italy might lead to a French attack on Germany'.[29]

It was in Hitler's interest to seek some sort of alliance with Mussolini and further to do everything possible to keep Italian troops occupied in areas other than the Brenner Pass. By keeping *Il Duce's* forces away from the Austro-Italian border and tied down in an expensive and consuming campaign in Spain, Hitler would be in a much stronger position vis-a-vis the watchdog to the south.[30] The Abyssinian venture had turned Mussolini's interests to the Mediterranean rather than to Central and Eastern Europe; now Italy might be turned, or at least distracted from the danger to the north.

Hitler, fearful of a *rapprochement* of England and France with Italy, was able to persuade Mussolini that Italy's future lay with her ideological brother to the north. Indeed, Mussolini had taken the first steps toward seeking joint German-Italian assistance to the rebels, even before the revolt broke out in July. In May he had telegraphed his Ambassador in Berlin, Bernardo Attolico, to inform the Wilhelmstrasse that Rome was ". . .gravely concerned to observe that Spain was inclin-

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[27] Lecture by Dr. Charles F. Delzell at Vanderbilt University, February 23, 1962. Walter Gorlitz, *History of the German General Staff, 1657-1945.* Praeger: New York, 1959), pp. 304-5.

[28] Elizabeth Wiskemann, *The Rome-Berlin Axis* (New York: Oxford University Press, 1949), p. 56.

[29] *Ibid.,* See also Bullock, *Hitler,* p. 303, and van der Esch, *Prelude to War,* pp. 14-15.

[30] Furnia, *The Diplomacy of Appeasement,* p. 207. See also Wiskemann, *Rome-Berlin Axis,* p. 57, and Shirer, *Rise and Fall of the Third Reich,* p. 297.

ing more and more to the Left." The Nazis took little interest at the time, but their interest increased in July when it appeared certain that Mussolini had committed himself to Franco and would indeed furnish the Spanish rebels with Italian troops and supplies, including airplanes, artillery and other weapons.[31]

Hitler now stated that German-Italian aid to Spain demonstrated the Third Reich's ideological solidarity with Italy. It was a demonstration to aid "an unhappy land and support a heroic man who, as a living patriot, wanted to save his people from destruction and did gloriously rescue them."[32] Thus through this "ideological solidarity" Hitler moved closer to the Rome-Berlin Axis.

The last, and possibly the most vital, motive for German aid being given to Franco was an economic one. Hitler was certain that a leftist government in Madrid would not be likely to supply Germany with the mineral exports she needed, or at least she would not supply them on reasonable terms.[33]

The *Fuehrer* was in no position to risk the loss of Spanish mineral exports since, in addition to a lack of sufficiently strong fortifications in the west and adequately trained reserves, his rearmament program had not produced enough material to equip and sustain the Wehrmacht in case a general war broke out in the near future.[34]

For a variety of reasons, then, Hitler decided to aid the Spanish rebels under General Franco. The question now arises, how much aid was given and how much did it help the insurgents' cause? The first German aid came in the form of a Lufthansa transport placed at the disposal of Franco and in which he made his historic flight from the Canary Islands to Tetuan, thus signaling the start of the revolt.[35] As mentioned above, Franco had appealed to Hitler via two representatives of the *AO* to send transports to enable him to move his Spanish Legion troops from Morocco to the Spanish mainland. Hitler responded on July 26, and the following day thirty Junker 52's arrived in Africa via France and Pyrenees to begin ferrying thousands of Legionaires and Moorish troops across the straits to Seville.[36] This German effort was the first great airlift in history.

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[31] Wiskemann, *Rome-Berlin Axis,* p. 57.

[32] Deren, *Non-intervention in the Spanish Civil War,* p. 118. See also Norman M. Baynes, ed., *The Speeches of Adolf Hitler, April 1922—August 1939,* two vols. (New York: Oxford University Press, 1942), I, 702-5.

[33] Van der Esch, *Prelude to War,* p. 13. See also Thomas, *The Spanish Civil War,* p. 229.

[34] Puzzo, *Spain and the Great Powers,* p. 98.

[35] *United Nations Security Council: Official Records.* First Year: Second Series; Special Supplement; "Report on the Sub-committee on the Spanish Question," (New York: Hunter College, June 1946), p. 7. Hereafter *UNSC Records.*

[36] Thomas, *The Spanish Civil War,* p. 229. See also *UNSC Records,* p. 7, and van der Esch, *Prelude to War,* p. 29.

About the same time a small squadron of German ships (the pocket battleship *Deutschland* and the torpedo boat *Luchs*) were dispatched to Morocco and arrived at Ceuta the morning of August 3, 1936.[37] That afternoon Rear Admiral Carls maneuvered the *Deutschland* between the city and a Republic battleship, *Jaime I*, which had arrived to bombard the city. The *Jaime I* left without firing a shot.[38] German and Italian airplanes provided the margin needed by the rebels to gain control of the strait and prevent the Republican forces, which still controlled the greater part of the navy, from interfering with the traffic between the African and Spanish coasts. At one point the *Deutschland* maneuvered itself between Franco's convoys and the Spanish fleet. By August Italy had her planes bombing and strafing Republican ships and submarines and forcing them to take shelter at Malaga and Gibraltar.[39]

On July 31 the first of the German "volunteers" (85), commanded by General Hugo von Scheele, sailed from Hamburg in the guise of a tourist group. The same ship carried the first six Heinkel fighters as well as bombs and anti-aircraft guns for use by the rebels. They arrived in Cádiz on August 5.[40] Four days later eighteen German Junker trimotor bombers, mostly new, arrived in Seville accompanied by six pursuit planes and an equal number of anti-aircraft guns of the latest model. These planes were accompanied by about thirty German pilots.[41]

About the last of July two holding companies were set up to channel war material to Spain and in exchange to despatch payment or raw materials back to Germany. In the event a German businessman had goods to sell to Spanish buyers he had first to sell them to the German holding company, which in turn would pass them on to the Spanish holding company that would market the products in Spain. Along with the holding companies a department in the German War Ministry, COS 'W', was detailed to supervise the recruitment of "volunteers" and the despatching of war material.[42]

In August the German Navy started assigning mine and radio specialists to serve with the Spanish artillery. These men were later transferred into the Condor Legion under the title "North Sea Group."[45] These transfers were followed by engineers, military and civilian, technicians,

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[37] *Documents on German Foreign Policy,* p. 26.

[38] Puzzo, *Spain and the Great Powers,* p. 64.

[39] Van der Esch, *Prelude to War,* p. 20-30.

[40] Thomas, *The Spanish Civil War,* pp. 229-30. See also Deren, *Non-intervention and the Spanish Civil War,* p. 127.

[41] Puzzo, *Spain and the Great Powers,* pp. 64-65.

[42] Thomas, *The Spanish Civil War,* p. 229. Thomas states that the Foreign Ministry was taken by surprise by this action but acquiesced without protest. p. 230.

[43] Deren, *Non-intervention and the Spanish Civil War,* p. 128.

more fighter planes, two tank companies, a battery of heavy anti-aircraft guns and some observation planes. The heavy equipment was under the exclusive control of the Nazis and their crews.[44]

Hitler, pushed by Goering and Canaris to aid Franco as much as possible and at the same time faced with cautious generals who doubted the value of "Operation Magic Fire" (the code name for the Spanish enterprise), outlined his program to Field Marshal Werner von Blomberg as follows: "Although German air support would be substantial, German aid on the ground would consist only of armament and sufficient personnel to train Spanish troops in its use."[45]

Around the first of September, 1936, Lieutenant General Karl Warlimont and Italian General Mario Roatta met with Franco at Cáceres where each promised him three companies of fully equipped troops. In October the German companies arrived.[46] In keeping with the promise of substantial air support four transport aircraft were dispatched to Spain every week from the first of August, in addition to cargo boats leaving Germany, mainly from Hamburg, every five days.[47]

On November 18, 1936, Hitler and Mussolini simultaneously proclaimed their recognition of the Franco regime as the *de jure* Spanish government. By this act they showed their intention to act together to see to it that a Fascist government recognized by them would succeed, since its failure would in turn reflect on them.

On November 30 Admiral Canaris arrived in Salamanca, Franco's headquarters, to inform the rebel leader that the Nazis were sending the Condor Legion under the command of Field Marshal General Hugo Sperrle to aid in the conflict.[48] General Sperrle was already in Spain commanding an air force corps that had arrived around November 7.[49] The completed corps consisted of 6,500 men and was to see action on every front in the war.[50]

The "Drone Group", two German tank companies, and one transport company and staff formed the nucleus of Franco's tank forces.[51] The Germans served as instructors and fighters. They designed and built

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[44] *Ibid.* See also Thomas, *The Spanish Civil War,* p. 230, and David Cattell, *Soviet Diplomacy and the Spanish Civil War* (Berkeley: University of California Press, 1957), p. 151.

[45] *UNSC Records,* p. 7.

[46] *Ibid.*

[47] Thomas, *The Spanish Civil War,* p. 230.

[48] *UNSC Records,* p. 7.

[49] Van der Esch, *Prelude to War,* p. 38.

[50] Deren, *Non-intervention and the Spanish Civil War,* p. 128. The cost to Germany for the Condor Legion alone, between November 7, 1936, and October 31, 1938, was well over 190 million reichsmarks. See *Documents on German Foreign Policy,* p. 786.

[51] *Ibid.,* p. 129.

the rebel field fortifications, excellent by any standards. They also organized and conducted the officer and noncommissioned officer training schools for the Spanish Fascists and supervised the rebel naval operations, such as mine-laying, and the cartographic headquarters at Vitoria. The Germans, through the Condor Legion, supplied the rebels with almost all their heavy artillery and trained artillerists. The Germans guarded their artillery and anti-aircraft batteries so well that even the Spanish and Italian officers were not able to examine them at close range. They also supplied the heavy bombers and pilots, navigators, and bombardiers.[52] In addition to training some 50,000 Spanish officers, the Germans instructed numerous tank, anti-tank, flame thrower, and communications troops.[53]

In one way, however, German aid never approached that of Italy. Though the two dictators made their intervention something of a joint effort, the quantitative aid rendered by the Italians was much greater than that supplied by the Nazis. Mussolini provided about four divisions of infantry, field artillery, light tanks and fighters, as well as some bombers and naval craft. Hitler provided similar items in smaller quantities. The Nazis' greatest contribution to Franco came in large amounts of heavy equipment and in organizing, supplying, and manning those highly technical services "without which modern war cannot be waged."[54] The German contribution, then, was qualitatively superior to that of the Italians.

In assessing the aid given Franco by Germany and Italy, Dante A. Puzzo states that it was the high quality of Germany's aid to the rebels and the swift efficiency with which it was delivered that saved the day for Franco's forces. Italy, he feels, could never have accomplished this alone.[55]

German aid to Franco amounted to over 500,000,000 reichsmarks of war material (over $199,000,000 U.S.). Salaries and expenses, a gift from Hitler to Franco, amounted to 88,000,000 RM, while 124,000,000 RM were used on direct deliveries to the rebels, and 354,000,000 RM were spent on the Condor Legion. Germany reached peak troop strength in Spain in the autumn of 1936 with about 10,000 civilian technicians and military men stationed there. Because of the rotating system that Goering explained in his trial at Nuremberg, the total number of Germans who aided Franco probably reached 16,000. Of these, approximately 300 were killed. Sperrle's Condor Legion always numbered about 6,000 men, who were supported by thirty anti-tank companies and two tank companies under the command of Colonel Ritter von Thoma, who

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[52] del Vayo, *Freedom's Battle,* pp. 54-55.

[53] Deren, *Non-intervention and the Spanish Civil War,* p. 129.

[54] Puzzo, *Spain and the Great Powers,* p. 65.

[55] *Ibid.*, pp. 65-66.

was later to replace Rommel as commander of the Afrika Korps.[56]

German aid to Franco from July 1936 to May 22, 1939, was expensive; naturally Hitler expected dividends on this investment. His troops had served well and had provided the margin needed for a Nationalist victory. Now was the time for the payoff.[57]

The Nazi investment brought immediate and handsome dividends in the form of iron ore deliveries from rebel-held territory.[58] The Germans made sure they would gain these dividends by using the threat of withdrawing the Condor Legion or withholding supplies from Franco. With this bargaining point they were able to obtain economic concessions from the Nationalist government. This was especially true after April 1938, when Franco's army had already reached the east coast of Spain and the Nazi High Command was becoming less enthusiastic about involvement in Spain while international tension was mounting in eastern Europe.[59]

As early as December 31, 1936, a protocol was signed between Germany and the Nationalists stating that "preference in supplying such goods as are of special interest to the two parties shall be mutually guaranteed." A further trade agreement was signed at Burgos in July 1937. By applying pressure, as noted above, the Nazis were able to gain more mining concessions in Spain and thus supplant French and British interest there. Between 1937 and 1938 the value of Spanish exports to Germany increased from 57,000,000 RM to 65,000,000 RM.[60]

The real winner in the German-Italian-Spanish alliance was Generalissimo Franco. He received invaluable Axis aid in overthrowing the Republican government and in gaining power for himself. In addition, in the protocol signed July 16, 1937, he received a promise that Germany would assist in the reconstruction of the Spanish economy after the Civil War ended.[61] Franco was also able to obtain aid and concessions from the Western democracies by playing them against the Axis.[62]

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[56] Thomas, *The Spanish Civil War,* p. 634.

[57] The Nazis faced in Spain many of their fellow countrymen serving in the International Brigades (Edgar Andre and Thaelmann Battalions). Thomas, *The Spanish Civil War,* pp. 638-39; Puzzo, *Spain and the Great Powers,* pp. 140-41; and Colodny, *The Struggle for Madrid,* pp. 59-60.

[58] *Documents on German Foreign Policy,* p. 566.

[59] van der Esch, *Prelude to War,* p. 39. The General Staff was not by itself in being dissatisfied. The Spanish enterprise was generally unpopular with the German people and cloaked in secretiveness most of the time. Deren, *Non-Intervention and the Spanish Civil War,* p. 118.

[60] *Ibid.,* p. 13.

[61] Puzzo, *Spain and the Great Powers,* p. 205.

[62] Charles Foltz, Jr., *The Masquerade in Spain* (Boston: Houghton Mifflin Co., 1948), pp. 141-46.

Germany benefited greatly from the economic dividends paid to her by the Spaniards, but just as valuable, if not more so, were the strategic and political advantages she received. She now had a nucleus of trained and battle-experienced officers and non-commissioned officers to lead her columns into Austria, Czechoslovakia, Poland, and France. Hitler's hope that conflict in Spain would cause internal turmoil in France became a reality. The French, threatened more than any other state by a Fascist take-over in Spain, instead of becoming united in a common defense against the threat, became more disunited and continued their class and political conflicts to the point that some Frenchmen were willing to support Franco as a means of striking out against their own government. Foreign affairs were subordinated to internal factional bickering and Hitler was the winner.[63]

In addition, collective security was dealt a body blow. The Soviets began to sense the appeasement attitude of England and France and decided that if the Western Powers would not act in Spain to counter the Fascists, then Russia would. Russia did not abandon the idea of collective security at this time, but remained suspicious of the Western Powers.[64]

Any hopes the British and French held for a *rapprochement* with Italy were killed by the Spanish conflict. England and France again faced Italy as they had during the Abyssinian War. The sanctions against Italy were dropped, but the League of Nations' non-intervention committee replaced them. The conflict generated between Italian intervention and British and French attempts to prevent this kept Mussolini separated from the West.[65]

Due to the struggle in Spain, Hitler gained a new ally. *Il Duce* had approached the Nazis in May 1936 with his concern about the leftist elements in Spain. It would seem from this time on that he felt more could be gained from cooperation with the Nazis than by a revival of the anti-German Strese Front with England and France. Although he did not trust the Germans, especially in Eastern Europe, Mussolini thought this cooperation would be a marriage of convenience more beneficial to Italy than Germany.

The Rome-Berlin Axis, informally established by cooperation in aiding Franco, was formally acknowledged in Berlin on October 25, 1936. This alliance, in reality, permitted Hitler whether Italy liked it or not, to carry out his Austrian *Anschluss* and to eliminate Czech influence in Central Europe, the latter being of as much interest to Mussolini as to Hitler.[66]

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[63] Bullock, *Hitler,* p. 303.

[64] Cattell, *Soviet Diplomacy and the Spanish Civil War,* pp. 32-34. See also Furnia, *The Diplomacy of Appeasement,* pp. 214-15.

[65] *Documents on German Foreign Policy,* p. 157.

[66] Furnia, *The Diplomacy of Appeasement,* pp. 216-18.

Though Franco was the winner in the long run, Hitler reaped important and substantial benefits from his intervention on the Nationalist side. For 500,000,000 RM worth of aid he obtained another hostile power on the French border, sowed dissension within France, estranged Italy from the West and pulled her closer to Germany, received valuable exports from Spain needed for a continued rearmament program, tested his armed forces and trained his troops, paved the way for the seizure of Austria and Czechoslovakia, and created tension between the West and the Soviet Union. All of this, of course, was invaluable to him in his planning and preparations for the coming war. Thus the Spanish Civil War, in addition to being a proving ground for the Second World War, was indeed one of the primary milestones on the road to that war.

WHAT ARE THOSE CLOUDS? BARIUM GAS!

By B.E. POWELL*

My telephone rang about 7:00 p.m. on January 20, 1971. The caller asked, "Have you seen how strange the moon looks tonight?" This was the first of a series of calls concerning several luminous objects which were located in the southern sky. When I went outside to see the lights, I recognized the clouds as being gaseous discharges from rockets. This identification was based on my having seen motion pictures of the movement of such clouds and having read articles in several periodicals.[1]

I saw the clouds three times in 1971. On January 20, 1971, three clouds were visible at 7:00 p.m. The largest was violet, another was green, and the smallest was whitish. Other observers in Carrollton, Georgia, reported additional smaller clouds and described the color of the largest cloud as ranging from pink to red. On Jaunuary 26, one green cloud and one violet cloud were visible. On February 1, at 6:45 p.m., observers saw a bright green cloud from which a violet cloud emerged. The clouds were 20°above the horizon. A simple trignometric calculation indicated the clouds were 350 miles away if the gases were released at an altitude of 125 miles as reported in newspapers. Although the colors of these clouds changed rapidly, remnants were visible 30 minutes after the initial sighting. All of these clouds were formed from gases released from rockets launched from Santa Rosa Island near Eglin Air Force Base, Florida.[2]

Two green clouds were formed on November 16, 1971, at approximately 6:08 and 6:15 p.m. These clouds were different from those seen in January and February, since they did not separate into clouds of differing colors and appeared to drift under atmospheric winds.

These gaseous discharges are used to study the earth's atmosphere as part of a program which began in the 1950's. In the early experiments, gases were released close to the earth's surface.[3] Scientists who tracked

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[1] "Preliminary Results of Electric Field Measurements in the Auroral Zone," H. Föppel, G. Haerendel, L. Haser, R. Lüst, F. Melzner, B. Meyer, H. Neuss, H.H. Rabben, E. Rieger, and J. Stöcker, *Journal of Geophysical Research*, LXXIII, No. 1 (1968), 21-26. "Artificial Plasma Clouds in Space," Gerhard Haerendel and Reimer Lüst, *Scientific American*, CCXIX, No. 5 (1968), 80-92. "Experimental Investigation of Electric Fields Parallel to the Magnetic Fields in the Auroral Ionosphere," S.B. Meude, *Journal of Geophysical Research*, LXXIII, No. 3 (1968), 991-97.

[2] "Flying Saucers? Weird! What are those Lights?", Atlanta *Journal and Constitution*, January 31, 1971, p. 18A.

[3] *The Upper Atmosphere*, H.S.W. Massey and R.L.F. Boyd, (London: Hutchinson, 1960), pp. 172-74.

the clouds through telescopes obtained information about the atmosphere by observing the movement of the clouds and the distortion of the clouds from their spherical shape. The experiments have become more sophisticated and are yielding information about higher regions of the atmosphere, such as the ionsphere.

The ionosphere is the part of the earth's atmosphere which extends from about 50 miles to several hundred miles above the earth's surface. Constituent gases are ionized by ultra-violet radiation. These ions (free electrons and positively charged atoms) give the zone its name and some of its properties, such as the reflection of radio waves back to the earth's surface. The ionosphere is not a static medium; its height, thickness, density, and degree of ionization fluctuate. The tidal actions of both the sun and the moon induce movement of the gases in the region. Solar activity (such as flares and sunspots) affect ionization.

Electric and magnetic fields are present in the ionosphere. In order to understand the ionosphere, information about these electromagnetic fields is needed. By measuring variations of these fields (especially at particular times such as periods of intense sunspots), the effects of extra-terrestial influences on the ionosphere can be determined.

Electromagnetic fields may be studied by observing the influences of these fields on charged particles. An electric field will exert a force parallel to the field on a positive charge. A magnetic field acts on charges which are moving. If a charge initially travels perpendicular to the magnetic field, its subsequent trajectory wil be a circle. If a charge moves in a magnetic field and electric field, its motion will be determined by the vector sum of the forces exerted by each field acting individually. In particular, for a positive charge initially moving perpendicular to an electric field and a magnetic field, its motion will be spiral. Hence, the electric field acting on the particles can be determined by studying the drift of charged particles in a known magnetic field. The magnitude and direction of the magnetic field in the atmosphere has been measured by instruments carried in balloons and rockets.

The artificial cloud method is the only reliable technique for measurement of the electric field. In a typical experiment, several kilograms of barium are vaporized and released at altitudes of 90-150 miles, which is the range of relatively inexpensive rockets. Barium gas is used because it is easily ionized by ultra-violet radiation and because the spectral emissions of the neutral gas and barium ions have wavelengths in the visible spectrum. Since the intensity of the emitted light is low, the experiments must be performed at twilight to make the cloud distinguishable from the scattering of light by the dense portions of the atmosphere. At twilight, the clouds will be illuminated, but the observers on the ground will be in darkness. The experiment is observed from two or more tracking stations in order that the position of the clouds may be determined by triangulation.[4]

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[4] "Artificial Plasma Clouds in Space," pp. 80-92.

The color, shape, and motion of the neutral and ionized particles are different. When barium gas is released, the cloud is green, because the radiations from neutral barium are strongest in the green region of the spectrum. Barium ionized by ultra-violet light radiates violet, blue, and red spectral lines; the resultant color is violet. The charged particles can be distinguished from neutral atoms because of the difference in color. The neutral, green cloud is spherical and moves under the influence of atmospheric winds. The barium ions interact with the electromagnetic fields and produce an elongated, violet cloud which moves under the combined forces of the wind, magnetic field, and electric field. Since the magnetic field is known from earlier experiments and the effects of the wind are measured from the neutral cloud, the characteristics of the electric field may be inferred from these experiments. Bluish clouds are sometimes seen during these experiments. These clouds are strontium gas, which is an impurity in barium.[5]

Since the gases are released at a high altitude, the clouds are visible over a large part of the earth's surface. The clouds emitted by rockets launched from Eglin Air Force Base, Florida, have been seen as far away as Kentucky.[6] Many people have formulated their own explanation about the origin of these clouds, such as reflections of moonlight from clouds, omens from God, and unidentified flying objects. Perhaps the green cloud might have caused some people to speculate that the Martians had arrived.

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[5] *Ibid.*

[6] "Flying Saucers?", p. 18A.

THE SEA IN FOUR ROMANTIC POEMS

By C. H. EDWARDS, JR.*

One can hardly think of Romantic poetry without thinking of poems that deal memorably with the sea. These range in method and mood from Coleridge's "Rime of the Ancient Mariner" with its highly imaginative Gothic experiences to the horrifying or satiric realism of sections of Byron's "Childe Harold's Pilgrimage" and "Don Juan." The four that I have chosen for discussion below have in common a certain symbolic use of the sea that became an archetypal pattern for Romantic poets. The four poets—Wordsworth, Poe, Whitman, and Lanier—insofar as they knew each other did not care for each other's poetry. Poe's judgment of Wordsworth is integral to the interpretation of Poe's poem below and will be discussed later. It will do to mention here that both Whitman and Lanier were quite aware of each other's presence and that each had serious reservations about the poetry of the other. Whitman characterized Lanier as "florid" and "gushing," and a critic who knew both poets said that "Whitman evidently did not put a high value on him."[1] Lanier on his part admired Whitman's large rhythms, his strength, and his manliness; yet he excoriated Whitman for much of his content, especially his literary exposure of the human body. He called Whitman "poetry's butcher. Huge raw collops slashed from the rump of poetry, and never mind gristle, is what Whitman feeds our souls with."[2] Lanier had a high regard for Poe but felt that "The trouble with Poe wash, he did not *know* enough. He needed to know a good many more things in order to be a great poet."[3] Whitman's attitude toward Poe was similar. He had read Poe's poems, "of which I was not an admirer," and felt that they had a "limited range of melody." He felt womewhat better about Poe's criticism, but only because Poe denied the existence of long poems.[4] That four such widely differing personalities with such

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[1] Charles Downer Hazen, ed., *The Letters of William Roscoe Thayer* (New York: Houghton-Mifflin, 1926), p. 34.

[2] Poem Outline Number 104. See Charles R. Anderson *et al.* eds., *The Centennial Edition of the Works of Sidney Lanier,* Vol. I of 10 vols. (Baltimore: The Johns Hopkins Press, 1945), p. 240. Lanier also made random comments about Whitman throughout parts of *The English Novel (Centennial Edition,* Vol. IV).

[3] Quoted by William Hayes Ward in *Poems of Sidney Lanier* (New York: Scribner's, 1884, 1916), pp. xxxv-xxxvi. Facsimile reprint of the 1916 edition by the University of Georgia Press, 1967.

[4] Quotations are from "A Backward Glance O'er Travel'd Roads"; see Harold W. Blodgett and Sculley Bradley, eds., *Leaves of Grass: Comprehensive Reader's Edition* (New York: W.W. Norton, 1965), p. 569. It is quite ironic that the author of "Song of Myself" could find value in Poe's dicta about long poems.

differing personalities with such disparate theories of poetry could arrive at the same symbols for the same things indicates that they shared a quality common to the romantic imagination.

In Section IX of his "Ode: Intimations of Immortality from Recollections of Early Childhood" Wordsworth argues that the memory of the spiritual or idealistic basis of our life in early childhood serves as a compensation for our loss of childhood happiness. In earlier sections of the poem he shows at length how we come into the world "trailing clouds of glory" (l. 64), how we gradually lose our vision of the spiritual pre-existence of our souls, and finally, as we are overcome by the mundane affairs of the world and lose this vision completely, how worldly custom lies upon us "Heavy as frost, and deep almost as life."[5] Only our brief periods of recollection of our childhood can assure us of the immortality of our souls. He concludes Section IX with the following lines:

> Hence in a season of calm weather
> Though inland far we be,
> Our Souls have sight of that immortal sea
> Which brought us hither,
> Can in a moment travel thither,
> And see the Children sport upon the shore,
> And hear the mighty waters rolling evermore.

It requires no great imagination to realize that in these lines the sea symbolizes the mysterious eternity from which our souls came; that the shore symbolizes childhood, which has not moved so far from its spiritual origin that it cannot see directly and intuitively the spiritual world; and that locations "inland" symbolize adulthood that can gain only brief glimpses of the sea and the children and of the relationship between them. Wordsworth is chronologically the first of the four poets to use these symbols and also the most explicit in their use. For this reason their easily decipherable meaning can be used as a key to the meaning of the poems which follow.

One cannot read far into the criticism of Edgar Allan Poe without realizing that Poe had little admiration for the poetry of Wordsworth. In his "Letter to B—" Poe held Wordsworth "...to blame for wearing away his youth in contemplation with the end of poetizing in his manhood."[6] A brief recapitulation of Poe's view of the mind and its functions, especially in the writing of poetry, will help to explain his position on Wordsworth. According to the phrenological fashion of his time, Poe divided the mind into three faculties—Intellect, Taste, and the

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[5] Quotations from Wordsworth's poem in this paragraph come from Russell Noyes, ed., *English Romantic Poetry and Prose* (New York: Oxford University Press, 1956), pp. 327-29.

[6] Quotations from Poe are taken from Eric W. Carlson, ed., *Introduction to Poe* (Glenview, III.: Scott, Foresman, Co., 1967), p. 427.

Moral Sense.[7] The function of the Intellect is to apprise us of factual truth; it is the province of the scientist. The function of the Moral Sense is to apprise us of our duty; it is the province of the preacher and the teacher. The faculty of Taste gives us "a sense of the beautiful"; it is "an immortal instinct, deep within the spirit of man." And this is the fair field of the poet: he must be concerned directly only with "Supernal Beauty," never with truth or duty. Insofar as these enter an imaginative work, story or poem, at all, Poe felt that they should be "a *very* profound under-current so as never to interfere with the upper one without our own volition, so as never to show itself unless *called* to the surface . . . ."[8] What Poe disliked about Wordsworth was his attempt to be philosophical, to preach a doctrine or argue a case in his poems. The doctrine should have been deeply hidden within the poem and only vaguely hinted at through poetic symbols.

In his own works Poe used symbols in this vague, nebulous way. One of his favorites was the dead beautiful woman, which he called "the most poetical topic in the world."[9] Richard Wilbur has pointed out that in almost every case Poe's beautiful woman is his symbol for supernal beauty, dead because her proper abode is in the spiritual world, not in the physical.[10] All the symbols under discussion work together in Poe's "Annabel Lee." The narrator and Annabel were companions only in childhood ("*She* was a child and *I* was a child"). Annabel was "the *beautiful* Annabel Lee" (italics mine). They lived "In this kingdom by the sea"—that is, on the shore, the symbolic point of disembarkation from the spiritual world into the physical. But their relationship here did not last long before Annabel died, retreating from the physical world. In this poem, as in Wordsworth's, we have the sea symbolizing the eternal and the shore symbolizing early life. Poe adds to these the dead beautiful woman to symbolize the vision of the ideal beauty which exists only in the spiritual realm. In both poems the soul of the poet loses its vision of the ideal by being born into this world. In other words, Poe's poem means exactly the same thing that the lines quoted from Wordsworth's poem mean. The difference is that the meaning of Wordsworth's sym-

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[7] Poe's clearest exposition of this matter occurs in his lecture "The Poetic Principle." See Carlson, pp. 456-57. Further quotations in this paragraph come from this source unless otherwise noted.

[8] From "Tale-Writing: Nathaniel Hawthorne." See Carlson, p. 495.

[9] From "The Philosophy of Composition." See Carlson, p. 446.

[10] Wilbur's explications of Poe's symbols are in his "Introduction" to Poe in Perry Miller *et al,* eds., *Major Writers of America* (one-volume edition), (New York: Harcourt, Brace and World, 1966), pp. 177-89 and in "The House of Poe," Robert Regan, ed., *Poe: A Collection of Critical Essays* (Englewood Cliffs, N.J.: Prentice-Hall, 1967), pp. 98-120. Wilbur also wrote the "Introduction" for the Laurel Poetry Series edition of Poe's poems, but the two previous articles are more fruitful for a study of Poe's symbols. Carlson also discusses Poe's use of symbols in his "Introduction" to the work mentioned above.

bols lies on the surface; the meaning of Poe's symbols can be arrived at only after concentrated intellection: it does not "show itself unless *called* to the surface." "Annabel Lee" may be facetiously regarded as Poe's attempt to show Wordsworth how it should have been done.

The third poem to be considered is Whitman's "Out of the Cradle Endlessly Rocking." The complex time structure of this poem adds a new dimension to the old symbols. Wordsworth's lines contrasted the view of the adult with the view of the child; Whitman's poem does essentially the same, but the greater length allows a more complex involvement at both time levels. The poem develops in this fashion: the poet as a child has an experience with two birds which he is unable to understand at the time. One of the birds dies, and its mate sings a dirge which is incomprehensible to the child. The experience occurs on the shore:

> Yes my brother I know,
> The rest might not, but I have treasur'd every note,
> For more than once dimly down to the beach gliding,
> Silent, avoiding the moonbeams, blending myself with the shadows,
> Recalling now the obscure shapes, the echoes, the sounds and sights after their sorts,
> The white arms out in the breakers tirelessly tossing,
> I, with bare feet, a child, the wind wafting my hair,
> Listen'd long and long.[11]

The song the bird sings adds force to the symbolic relationship of the sea and the shore. In his grief he recognizes the polar contrast between the two:

> *O madly the sea pushes upon the land,*
> *With love, with love.*

He seems to see his beloved against the background of the sea: *"O night! do I not see my love fluttering out among the breakers?"* Clearly the sea here, as in the two previous poems, symbolizes eternity, the abode of the soul after death and before life (in other poems—"Crossing Brooklyn Ferry," for instance—Whitman makes clear his belief in the preexistence of the soul). After the poet matures, he is able to interpret the bird's song, which becomes an inspiration for his own song. He finds in it a hint of the meaning of life and eternity, coming to a full understanding of the meaning only after he returns to the sea as a man and hears the lesson it teaches:

> Are you whispering it, and have been all the time, you sea-waves?
> Is that it from your liquid rims and wet sands?
> Whereto answering, the sea,
> Delaying not, hurrying not,
> Whisper'd me through the night, and very plainly before day-

[11] Quotations from Whitman's poems come from Blodgett and Bradley, pp. 246-53.

break,
Lisp'd to me the low and delicious word death,
And again death, death, death, death,
Hissing melodious, neither like the bird nor like my arous'd child's heart,
But edging near as privately for me rustling at my feet,
Creeping thence steadily up to my ears and laving me softly all over,
Death, death, death, death, death.

Thus life, represented by the child, the man, and the symbolic shore, becomes meaningful only when it sees through death to eternity and mystically merges with it for the moment. Whitman's handling of this theme and these symbols parallels both Wordsworth's and Poe's.

In "The Marshes of Glynn" Sidney Lanier used four major symbols to record the progress of the soul toward its perfection. The poem opens with a scene in the woods, which symbolizes the healing effect of Nature.[12] This scene occurs "While the riotous noon-day sun of the June-day long did shine," during the greater part of the day.[13] After the woods have completed their ministrations, the poet moves to a sandy beach separating the woods from the marsh, a vantage point from which he can observe the marsh and the sea. The "firm-packed sand" of the beach symbolizes the spiritual foundation that the poet gained from the ministrations of the woods, and the marsh symbolizes the concomitant freedom of his soul from spiritual disease, "From the weighing of fate and the sad discussion of sin." During the time that it takes the poet to achieve this state, the sun sets. Thus by the time that he is ready to consider the sea in the last quarter of the poem, another common poetic symbol, the use of the day for the progress of life, has run its course. The metaphorical point of death, then, is the point where Lanier comes to use the main symbol that we are concerned with. The poet stands on the shore, contemplates the meaning of the sea, and bids farewell to the sun. The coming of the tide that floods the marsh represents the merging of the poet's soul with eternity. That the experience is only metaphorical is shown by the fact that the knowledge obtained is not absolute or complete. Some questions that are left unanswered will remain unanswerable until the final actual merging of the soul with eternity that occurs in death. But in the mystical experience that occurs in the poem the poet does become convinced that there is an eternity that lies beyond death, and like the other three poets above, he uses the sea to symbolize it.

[12] The best critical discussion of "The Marshes of Glynn" is Robert H. Ross's "'The Marshes of Glynn': A Study in Symbolic Obscurity," *American Literature,* XXXII (Jan. 1961), 403-16. However, Ross's article has a major flaw in that it overlooks one of the primary symbols in the poem, the strip of sand that lies between the woods and the marsh.

[13] My text for "The Marshes of Glynn" is in Vol. I of the *Centennial Edition,* pp. 119-22.

A major philosophical tradition that became a significant part of the intellectual content of Romanticism among the better Romantics was the Platonic and neo-Platonic view of the soul and its relationship to the world of ideals. Many are aware of the acknowledgment that Wordsworth made of his use of it in the "Intimations Ode." Briefly, according to Plato the soul before its birth into a human body had its own pure existence in an intellectual realm, knowing intuitively and directly the perfect forms of things. In order to live well, the human being, consisting of an awkward combination of soul and body, must spend its life trying to regain through recollection the perfect knowledge that the soul had before its traumatic entrance into this world. The only way it can do so is by denying the comforts of the body in order to increase the comforts of the soul. The soul must continuously strive to escape its earthly prison. Life in this world is simply a testing ground for the soul; and if it proves its strength here, it is freed at death to live forever in the intellectual realm, happy in its perfect knowledge of the ideals. Three of the poets discussed above—Wordsworth, Poe, and Whitman—posit the pre-existence of the soul in a world of ideals as Plato does, and they all use the sea to represent this world symbolically. Lanier, who was not as deep a thinker as the other three and who was probably not so well aware of his place in intellectual tradition as they, never granted the soul any form of pre-existence. But when he considered its post-existence, he used the same symbol as the other three for the ideal world to which it journies. The foregoing brief discussions of four poems shows that the use of this symbol did become an archetypal pattern in romantic poetry. The discussion is in no sense complete. Further search and study would undoubtedly uncover other interesting aspects of the archetype. For instance, Poe's "The City in the Sea" would produce very interesting, if not insurmountable, archetypal problems; and close scrutiny of all the poems in Whitman's *Sea-Drift* (to which "Out of the Cradle Endlessly Rocking" belongs) would certainly produce qualifications of the archetype as it applies to Whitman. My purpose here has been only to establish the pattern. There is wide room for further study.

A STUDY OF VALUE JUDGMENTS IN A SAMPLE OF ADULTS FROM TWO WEST GEORGIA COUNTIES

By PEARL NIX*

Understanding the motivation underlying behavior involves more than dipping into the past; one must dip below the surface into the spring from which actions flow—to the core of being called one's value system. With reference to this study, a value system is a hypothetical construct or function of one's mind enabling the person to weigh the relative merits of a successive stream of thoughts coursing through his consciousness. Although each person's system of values is unique, it reflects the collective consciousness of his culture. Through the processes of learning, the individual acquires a value system, having some of the characteristics of his parent culture but stamped by his own individuality. This system includes the criteria by which the individual evaluates formally or informally the alternatives which appear to him at any choice point. In a specific instance, a value can be construed as the rule an individual uses to choose which of the mutually exclusive courses of action he will undertake. These values monitor the person's actions. The more harmonious, compatible and internally consistent the individual's value system, the less mental conflict and frustration he is likely to experience.

Since value systems may be considered hypothetical constructs, they cannot be measured directly any more than can intelligence; they can only be inferred from the behavior of the individual as he faces a choice point. In this case his decision may be referred to as a value judgment; in other words, he has chosen one alternative over one or more possible choices. From his judgment one may infer which of the alternatives he values most at the moment.

The more stable one's value system is the more likely he is to be consistent in his value judgments. Thus it is assumed that older people are more consistent; however, it is entirely possible for the person who continues to learn to have a fluid value system. He will likely maintain a basic framework which lends predictability and a degree of consistency to his behavior; yet he may make progressively finer discriminations and weigh alternatives with a more sensitive scale; in other words, he may move from the use of the more common "grocery scales" to the greater precision of the "gold scales."

The purpose of this study is to focus upon the value judgments of individuals of different ages and professional orientation to discover some of the things that really matter to them and to determine whether there

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are differences between the sexes and between groups of different ages and professional orientation.

The sample was obtained from two West Georgia counties and consists of the following groups:

Class	Sex	Average Age	Number	Totals
High School Seniors	Male	17	78	
	Female	17	95	
				173
Parents	Male	47.3	16	
	Female	43.5	66	
				82
Teachers	Male	36.8	28	
	Female	35.2	51	
				79
Teachers (members of Delta Kappa Gamma Society)	Female	56.3	32	32
				366

The members of the Research Committee of the local chapter of the Delta Kappa Gamma Society (an honorary society for women teachers) developed a questionnaire, "Study of Value Judgments", composed of ten multiple-choice items, twenty agree-disagree items and six open-ended questions which presented the respondent with opportunities to make decisions, calling into action his value system. These questionnaires were distributed to the sample. Both rural and urban school communities were included from which whole classes of seniors were chosen. In most instances classes in the core curriculum such as English and social studies were used. Both high school and elementary teachers were included and the parents were drawn from the school communities. A total of 366 people completed the questionnaire.

The Research Committee tabulated the responses to each alternative of each item. Then the numbers of responses were converted to per cents of the total subgroup. All groups were divided by sex; hence the total sample was treated as seven subgroups. In each subgroup the per cent of members responding to the alternatives for each item did not always equal 100 per cent; for, in a few cases persons chose more than one answer even though they were instructed to choose only one; in other instances some people omitted one or more items. In each table the per cent cited is of the total subgroup in question; for example, for the 28 male teachers, each per cent represents a proportion of 28 even though in some cases only 25 of the 28 responded to a given item. The tables do not indicate the per cents who responded in some way.

Contingency tables were used to compute chi-square's to determine whether the differences in responses between groups were significant. The .05 level of significance was accepted.

The responses of the entire sample to the questionnaire, "Study of Value Judgments," are reported in Tables I, II, and III which show the per cent of each group responding to each alternative.

TABLE I.

RESPONSES TO THE ALTERNATIVES TO TEN MULTIPLE-CHOICE ITEMS

(In Percentages)

Test Items	Students		Parents		Teachers		DKG Members
Sex	M	F	M	F	M	F	F
Number	78	95	16	66	28	51	32
1. My ideal job gives me opportunity to:							
a. Associate with popular people.	4	0		2	4	2	
b. Make a high salary.	36	22	25	15		4	
c. Find expression for abilities, interests	46	45	50	32	36	34	13
d. Contribute to the welfare of others	14	31	25	51	61	60	87
2. Thing most essential to personal happiness							
a. Personal and economic security.	17	9	13	4	4	4	6
b. Love of family and friends.	39	58	50	54	32	52	37
c. Challenging work	9	7	25	4	32	12	28
d. Peace of mind	23	25	19	41	43	36	28
3. I prefer to spend my leisure time							
a. Being entertained by others	10	16	13	4	7	4	3
b. Pursuing my own hobbies	31	21	50	45	43	42	22
c. Expanding interests and abilities—study travel	17	22	25	43	40	56	71
d. Engaging in group activities—sports	50	45	19	21	25	18	3
4. Primary reason for not cheating							
a. Danger of being caught and punished	27	14					
b. The Bible says it is wrong	14	14	31	46	4	14	6
c. Violates property rights of others	8	10		43	11	2	

Test Items	Students		Parents		Teachers		DKG Members
Sex	M	F	M	F	M	F	F
Number	78	95	16	66	28	51	32
d. Violates own sense of human dignity	46	58	69	21	88	86	90
5. To me freedom is							
a. Privilege of choosing within democracy	53	45	56	63	68	74	75
b. The right to do just as I choose	13	12	13	3		2	
c. Opportunity for rule by majority with dissent by minority	32	30	31	33	32	36	22
6. Current tendencies most disturbing							
a. materialism	9	26	19	15	14	16	12
b. Self-indulgence	12	16	6	12	7	10	22
c. Flabby-minded apathy	25	26	25	19	43	34	16
d. Lack of self-control	14	16	25	21	14	18	19
e. Tendency to herd together	5	8	6	7	4	8	
f. Inconsistency between saying and doing	36	19	19	25	14	20	24
7. Religion is							
a. Total life orientation relating one to highest value	12	2	13	12	32	30	22
b. Response to God's revelation	56	71	81	75	40	44	65
c. Being concerned about one's being.	10	1	6	3	7	6	
d. System of beliefs relating one to world	22	25		10	21	20	9
8. Major aim of church should be							
a. Help members live Christ-like life	49	33	50	51	32	34	22
b. Solve social problems: poverty, etc.	4	9			7	6	
c. Foster spiritual development, communion with God	42	62	57	52	50	60	78
9. Major responsibility of public education							
a. Prepare young for vocational success	16	9		6	11	4	
b. Prepare young for responsible citizenship	22	20	19	21	11	14	28
c. Prepare young for full, productive life in changing society	60	66	61	64	75	88	71
d. Prepare young for parenthood and family life	4	6	13	4	4		

Test Items		Students		Parents		Teachers		DKG Members
	Sex	M	F	M	F	M	F	F
	Number	78	95	16	66	28	51	32
10. Most likely way to decrease poverty								
a. More social-minded corporations		18	13	13	3	4	8	12
b. More governmental control of social welfare		13	26	6	6	4	6	
c. More general education		58	40	61	79	68	72	78
d. A better way to distribute wealth		9	21	13	4	18	6	6

TABLE II.

AGREEMENT AND DISAGREEMENT WITH TWENTY STATEMENTS

(In Percentages)

Statements		Students		Parents		Teachers		DKG Members
	Sex	M	F	M	F	M	F	F
	Number	78	95	16	66	28	51	32
1. American security and well-being demand individual support of local police and other law-enforcement officials	Yes	82	82	81	93	96	94	97
	No	18	16	19	3	4	6	3
2. It is wrong and unfair not to pay one's full share of income tax on actual income.	Yes	77	82	88	95	92	92	97
	No	22	18	12	5		8	3
3. Living by moral principles of honesty, truthfulness and respect for the life and property of others is essential to my own personal welfare.	Yes	87	91	94	97	100	98	97
	No	13	7	6	2	4	4	
4. All members of the community have the right to the protection of life against physical violence even if they cannot pay for protection.	Yes	97	91	94	97	96	96	100
	No	3	7	6	2	4	4	
5. Provisions for decent housing and the elimination of slums is not a problem for individuals and communities but should be delegated to federal government.	Yes	26	26	31	9	4	14	9
	No	73	74	69	80	96	86	91

Statements		Students		Parents		Teachers		DKG Members
	Sex	M	F	M	F	M	F	F
	Number	78	95	16	66	28	51	32
6. Management and labor should share the power in determining conditions, tenure and salaries or other rewards of employment.	Yes	83	76	88	81	79	88	81
	No	16	17	12	16	14	12	16
7. Beautifying the natural and social environment is both a personal and social responsibility.	Yes	96	99	100	95	100	100	97
	No	3	1		2			3
8. Some form of meaningful work is essential to every person if he is to live a significant life of abiding satisfactions.	Yes	86	92	100	95	92	96	100
	No	14	5			4	4	
9. Adequate medical protection and care should be contingent upon a person's ability to pay for them.	Yes	26	31	31	39	29	32	37
	No	74	64	69	53	69	70	63
10. God has shown Himself to mankind in the person of Jesus Christ.	Yes	93	89	94	97	90	98	100
	No	7	6	6	3		2	
11. God continues to move through His creation and reveal Himself to honest seekers.	Yes	86	44	88	95	83	92	100
	No	12	10	12	2	4	4	
12. The **Bible** as a whole is a spiritual revelation of God.	Yes	83	87	88	93	79	84	100
	No	12	7	6	2	18	14	
13. A beautiful church or cathedral inspires within me reverence and a desire to worship.	Yes	36	59	44	60	47	64	81
	No	61	41	56	36	47	32	16
14. One can be a Christian without embracing a religion.	Yes	68	70	31	56	79	56	62
	No	30	25	69	41	21	36	34
15. Parents should see that their children consistently experience the natural consequences of their conduct.	Yes	79	71	88	78	86	78	93
	No	19	27	6	12	11	22	7
16. Permitting the child to suffer the natural consequences of his action is a system of pure justice which will be considered by the child as fair.	Yes	45	43	63	55	68	46	65
	No	52	51	25	36	21	40	31

Statements		Students		Parents		Teachers		DKG Members
	Sex	M	F	M	F	M	F	F
	Number	78	95	16	66	28	51	32
17. Sex education is a family responsibility which should not be assumed by school.	Yes	21	32	69	55	18	40	56
	No	76	68	31	38	72	60	39
18. Moral values should be a responsibility of the school as well as of the family.	Yes	78	76	88	84	86	88	100
	No	20	24	12	11	11	12	
19. Censorship of motion pictures is an unnecessary abridgment of personal freedom.	Yes	58	31	25	14	25	26	3
	No	40	57	75	80	68	70	97
20. One should obey only those civil laws which he considers good or right.	Yes	16	17	19	3	7	2	
	No	84	82	81	92	90	98	100

TABLE III.

RESPONSES TO SIX OPEN-ENDED ITEMS

(In Percentages)

Items and Responses	Students		Parents		Teachers		DKG Members
Sex	M	F	M	F	M	F	F
Number	78	95	16	66	28	51	32
1. What is the one thing most essential to your happiness and well-being?							
a. Loving and being loved by family and friends.	21	39	31	33	11	38	19
b. Money and social security.	13	7	31	8	7	10	
c. Freedom	11			3			
d. Making something of self	9	3					
e. Living own life and doing thing	9	6					
f. Peace of mind and harmonious relationships	6	5		24	29	18	16
g. Happiness	6	5					
h. Living a Christian life—faith in and approval of God	8	13	31	15	7	6	19
i. Getting along with people	6	9					
j. Helping others—service		9		6	22	12	9
k. Meaningful work, reaching goals		6	19		14	12	31
l. Graduation		5					
m. Health			12	4	6		

Items and Responses	Students		Parents		Teachers		DKG Members
Sex	M	F	M	F	M	F	F
Number	78	95	16	66	28	51	32
2. From your observation what appears to be the major reason causing most teachers to enter the field of education.							
a. Social service—helping youth develop	49	45	44	51	65	40	71
b. Characteristics of job—salary, convenient hours, summer vacations	14	8	44	18	22	40	15
c. Personal fulfillment		4		9			
d. Way to make living—comfortable				6	4		9
e. Lack of better vocation	5	6					
f. To avoid draft—men		6					
g. Interest in subjects—enjoyment	13						
3. As you view the current scene what do you believe the average American's primary goal in life to be?							
a. Economic security	39	29	82	57	58	52	37
b. Success in something useful	10	26		9		20	12
c. Social acceptance, prestige, popularity		3		9	18		22
d. Happiness and personal fulfillment	8			8	14	12	16
e. Pleasure			6		7		
f. Freedom and independence	12	2					
g. Peace in the world		6					
h. Comfortable home and good family life		2	6			14	
i. Making country a better place to live	4	7					
j. Power				5			
4. What do you consider America's number one problem?							
a. Poverty and pollution	33	14	13	9			
b. War in Viet Nam	16	8		6		10	6
c. Lack of concern for others		6		24	14	18	6
d. Breakdown in law and order		6			18		
e. Distorted values and moral decay		5	38	26	25	38	12
f. Inability to get along with others	20	10			40		
g. Racial tension	13	10	19	5			
h. Selfishness		7		5			
i. Drugs	9	2				4	
j. Lack of peace—violence							
k. Pollution	13	12		2			
l. More and better leadership							

Statements	Students		Parents		Teachers		DKG Members
Sex	M	F	M	F	M	F	F
Number	78	95	16	66	28	51	32
m. Lack of respect for authority							22
n. Lack of desire to follow God's laws	3			2		10	9
o. Crime				3			9
p. Breakdown of communication in family						6	9
q. Lack of education						4	
r. Communists in American government			13				
5. What is the greatest unmet need in your community?							
a. Lack of recreational facilities	20	19	6	21	11	16	
b. Better and more education	9	5	6	6	25	10	22
c. Poverty and care for underprivileged	4	8	13	3	11		
d. Concern for others and better relationships	10	13	6	24	14	18	6
e. Pollution of the environment		3		2	14	6	6
f. Oneness of purpose			6		7		
g. Poor housing	4	3		3			9
h. Respect for God and participation in church		3	6	5			
i. More capable men on police force	5	3					
j. Better race relations		3					
k. Strengthening family relationships	3					8	
l. Higher standards of morality			13				
m. Leadership				3			
n. Better roads	7						
6. Name three best ways to improve life in your community							
a. Better communication and understanding	29	23					31
b. Higher quality education for all	23	14		33	50	46	39
c. Election of leaders who are concerned	4	6					16
d. More faith in God and participation in church—drawing people closer to God.	4	9	25	15	22	12	34
e. More people involved in solving problems				8			12
f. More recreational facilities	29	23	19	27	22	22	12
g. More love and concern shown for all	10		31	45	36	48	22
h. More civic pride and willingness to serve	9	21		18			19
i. More emphasis upon values—character	10				11		6

Statements	Students		Parents		Teachers		DKG Members
Sex	M	F	M	F	M	F	F
Number	78	95	16	66	28	51	32
j. Better trained police and law enforcement	9	9	31		46	12	
k. Eliminate pollution		8	6	18			
l. Less racial discrimination		8					
m. Decrease poverty—more employment	8	11			11	14	
n. Improved housing and roads	14		25	12			
o. Stronger homes					11	8	12
p.Clean-up slums		8					

Chi square tests revealed that the following groups differed significantly from each other on the multiple-choice items:

Item	*Groups Differing Significantly*
1. Ideal job	Students—Teachers Male—Female Students parents—Teachers Teachers—Delta Kappa Gamma Members
2. Thing most essential for happiness	Male—Female Parents Students—Teachers
3. Preference for spending leisure time	Students—Parents and Teachers
4. Reason for not cheating	Students—Parents Male—Female Parents Male Parents—Male Teachers
5. Concept of Freedom	Students—Teachers
7. What religion is	Male—Female Students Students—Parents Parents—Teachers Students—Teachers
8. Major aim of Church	Male—Female Students Students—Parents Parents—Teachers Female Teachers—Delta Kappa Gamma
9. Major responsibility of public education	Students—Teachers
10. Most likely way to decrease poverty	Male—Female Students Students—Parents and Teachers

The following significant differences were noted on the agree-disagree items:

Item	*Groups Differing Significantly*
1. Support of law enforcement officials	Male—Female Parents
2. Paying income tax	Male—Female Parents
5. Provisions for decent housing	Female Students—Female Parents
8. Meaningful work	Male—Female Students
9. Adequate medical protection	Male Students—Female Parents
12. The Bible as revelation of God	Female Teachers—Delta Kappa Gamma
13. Worship and a beautiful church	Male—Female Students
14. Being a Christian without embracing a religion	Students—Parents

16. Permitting child to suffer natural consequences of actions ..... Students—Parents
17. Sex education in school..... Students—Parents
Parents—Teachers
18. Moral values in school..... Female Teachers—Delta Kappa Gamma
19. Censorship of motion pictures..... Male—Female Students
Female Teachers—Delta Kappa Gamma
Students—Teachers
20. Obedience to Civil Laws ..... Male—Female Parents

From the data presented, the following trends were observed in the sample studied:

1. Making a high salary and expressing one's abilities through his work seem to be more important to the youth, whereas the adults seem more concerned with contributing to the welfare of others.
2. Both the youth and adults consider love and peace of mind essential to their happiness with youth leaning more strongly toward love.
3. For leisure time youth prefers group activities and sports whereas adults choose hobbies, study and travel.
4. Both youth and adults indicate that cheating violates their sense of human dignity, but youth also considers the danger of being caught and punished.
5. Youth and adults alike tend to define freedom as the privilege of choosing within a democracy or rule by the majority with dissent by a minority.
6. Youth and adults tend to agree that religion is a response to God's revelation, that the church should be primarily concerned with the spiritual development of members, and that the Bible is a spiritual revelation of God.
7. Both youth and adults tend to consider the preparation of the young for a full life as the major function of education.
8. Although youth sees education as a solution to poverty, they lean more strongly toward governmental responsibility than do the adults who strongly favor education.
9. Youth appears slightly less supportive of laws and taxes than do adults.
10. Youth and adults seem equally concerned about living by moral principles, respecting the rights of others and protecting the environment.
11. Both youth and adults appear to share a need for meaningful work, a desire to extend medical protection to everyone regardless of his ability to pay, and the belief that management and labor should share the power exercised.
12. The males from both the youth and adult groups appear to be

less influenced by the beauty of a church than the females.

13. Youth and teachers favor the schools assuming responsibility for sex education, whereas parents tend to think the responsibility lies in the home.
14. Adults are more inclined to favor censorship of motion pictures than are the youth.

To what extent does the sample reflect prevailing attitudes and values characteristic of American citizens in general? The most comprehensive summary may be one by Thomas Griffith in his article, "Putting It Back Together" (*Life*, Jan., 8, 1971) from which the following contrast between youth and adults was presented:

As Mr. Griffith observed, these are the qualities of youth which might be expected to survive in a synthesis:

1. Honesty and outrage over violations of morality in business, advertising, and personal conduct.
2. Belief that materialistic values hold too much sway and that corporations should be answerable to social responsibilities as well as profit.
3. Better understanding and relationships especially between blacks and whites.
4. Desire to be in tune with nature rather than to conquer it.
5. Desire to live life in such a way that its humanity is evident every day.
6. Less competitive interest in living in a good neighborhood.

And these are the values he identified in the older society:

1. A stubborn belief in accommodation as an essential element of democracy, recognizing that previous social changes were hammered out by earlier generations.
2. A conviction that rank, hierarchy and structure are functionally necessary in society even when overdone. Coupled with this conviction is the belief that gradations of experience, competence, and effort should be accorded differing rewards.
3. A deeper awareness of the contrariness of human nature reflected in skepticism toward exhortation, impatience with sweeping moral solutions, and shrewd appraisal of malarky and inflated reputations.
4. A pride in a hard-won past against the onslaughts of those who have not had to fight for what they have and thus too easily reject it.
5. A conviction that order is a surer guarantor of justice in the long run than disorder.

The responses of the students suggesting that they have several of the characteristics of the youth described by Mr. Griffith include the following:

For the thing most essential to their happiness the majority listed love, freedom, making something of self, service, living a Christain life rather than money and social security. Only about one-third of the group indicated that the average American's primary goal in life is economic security, whereas about two-thirds listed other goals. Thus it appears they are deemphasizing materialistic values.

The students' views of America's number one problem are also revealing in that about 46% of the males and 26% of females considered poverty and pollution the major problem and 33% of the males and 20% of the females listed inability to get along with others and racial tensions. These responses convey a concern for improved living and environmental conditions as well as better human relationships.

Their concern about honesty and consistency in behavior is reflected in these responses: 36% of the males and 19% of the females listed "inconsistency between saying and doing" as the most disturbing current tendency; about one-fourth of the students listed flabby-minded apathy as most disturbing.

When considering ways to improve community life, about one-third of the student group suggested understanding, better communication and relationships with others. A desire to decrease poverty and improve housing was reflected in a number of their responses; they also seemed to favor more governmental intervention in solving these problems.

Although the sample of students was not evaluated explicitly by Mr. Griffith's list of characteristics of youth, it can be observed from their responses that a significant number possess several of the qualities he identified, including: desire for honesty and consistency in behavior, decreased acceptance of materialistic values, desire for better human relationships, concern for environmental quality and a willingness to share the better things with all people.

The responses of the adult groups studied also suggest they possess some of the characteristics of Mr. Griffith's older society. For example the things they listed as most essential for their happiness include: meaningful work, love of family and friends, social service and peace of mind, suggesting a deep appreciation of basic human needs. More than half the sample considered economic security and a comfortable home as the primary goal of Americans. As America's number one problem the thing mentioned by the greatest number was distorted values and moral decay. Others mentioned the break-down in law and order, lack of respect for authority and lack of concern for others. To improve community life they strongly favored higher quality education, better communication and civic pride, more faith in God and love and concern for others, and better law enforcement.

Thus it appears that at least many of the adults in the sample possess qualities characteristic of Mr. Griffith's older society. They tend to be hopeful about finding solutions to present problems and to have faith

in the democratic way of life. Their responses reflect pride in their economic achievements and a belief in law and order.

From a synthesis of their responses these are the qualities which the students responding to the West Georgia questionnaire appear to share with American youth in general: a desire for honesty and consistency in behavior, decreased acceptance of materialistic values, desire for better human relationships, concern for environmental quality and a willingness to share the better things with all people.

Although the adult groups shared many of views of the students, they tended to reflect other attitudes and values which have been associated more with the older society. They tend to be hopeful about finding solutions to present problems, to have faith in the democratic way of life, to reflect pride in their economic achievements and to have a rather strong belief in law and order.

ABSTRACTS of MASTER'S THESES and SPECIALIST IN EDUCATION PROJECTS

Allen, John A., Jr. (Biology, March, 1971)*

PATTERNS OF CORTICOLOUS MOSSES ON THE TRUNKS OF SELECTED SPECIES OF TREES

This study attempts to demonstrate the growth pattern and frequency distribution of some corticolous mosses found on the trunks of several species of trees. The growth patter is mapped and described. The frequency distribution of mosses on three species of trees selected for varying bark pattern and surface texture is determined, and their distribution in relation to bark pattern and surface texture is discussed.

Browne, Richard A. (Psychology, March, 1971)

AN EXPLORATORY SURVEY OF THE PSYCHO-SOCIAL ASPECTS OF 100 MALE AND 30 FEMALE TRANSSEXUALS

This survey is designed to reveal the social, cultural, and family backgrounds of a sample of 100 male and 30 female transsexuals. The male sample contains 55 post-operative and 45 pre-operative cases, the female sample is inclusive of 12 post-operative and 18 pre-operative cases. Both samples were obtained from Benjamin's population of transsexual patients.

The purpose of the study is to add factual knowledge where now there exists much speculation, and to provide some data which may lead to a further understanding of the transsexual as an individual and the problem of transsexuality. The analysis of the case histories of the 130 transsexuals yielded the following major findings: transsexualism exists in all ethnic groups, social classes and educational levels; conditions indicative of transsexual conditioning is evident in some of the family histories; religious affiliation may be an influential factor and is a subject for further inquiry.

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*"Biology" is the awarding department and "March, 1971" is the time of completion of all requirements for the degree. Specialist in Education research projects are listed as "Guidance and Counseling, August, 1971."

Cotton, James John (Psychology, March, 1971)

HUMAN GROWTH AS A FUNCTION OF THE BASIC ENCOUNTER GROUP MARATHON

This thesis reports the phenomenological description of the author's involvement as a facilitator-participant in a twenty-four-hour basic encounter group marathon. The dimensions of participating in and facilitating such a marathon are intimate relationships as experienced by the author and the eleven other participants. The matrix for the phenomenological investigation is identified as the basic encounter process, a synergic model of human growth, and the interactions.

To begin with an overview of the encounter group phenomenon is presented. The levels of consideration are psychological, sociological, and methodological. The subjective dimension of experiential data is of primary consideration in a review of some of the literature. Then the basic encounter group marathon process, the special demands of a professional facilitator of such a schedule, and a model of human growth are considered. The marathon group is described as a social interaction laboratory uniquely concerned with facilitation of human growth potential.

Later the author reports his personal involvements gleaned from tape recorded for research purposes. Some of the interaction is reported verbatim.

Finally the phenomenological content within the context of process, faciliatation and human growth needs is summarized. The human potentials aspects of the humanistic psychology movement is viewed as movement toward fulfillment of personal growth.

Buckner, Betty R. (Biology, June, 1971)

A STUDY OF VARIOUS PHYSIOLOGICAL FUNCTIONS IN RELATION TO BODY POSITION AND IMMERSION OF THE FACE IN WATER

Slowing of the heart rate, is a response to apneic diving which man has in common with many other vertebrate species. In the present study, bradycardia was observed in ten subjects during simple breath hold tests and in eight subjects during immersion of the face in water. There were no observable differences in mean blood pressure. While pulse patterns were irregular, the amplitude of the pulse wave was reduced to one-half its original size during breath holding and one-third its original size during face immersion. Skin resistance response stopped immediately upon immersion of the face in water. Position of the body did not have a detectable effect on bradycardia.

Burkhalter, Albert Floyd (Psychology, June, 1971)

ATTITUDE CHANGE AS A FUNCTION OF COMPARATIVE METHODS OF INDUCING COGNITIVE DISSONANCE

This study investigates the problem of the concomitant existence of conflicting attitudes within the individual due to the temporal experiencing of these conflicting attitudes. It was hypothesized that a communication which would force the individual to experience an attitude toward pollution, concomitantly with other conflicting attitudes, would result in a shift in attitude toward pollution.

Forty-three subjects in the experimental group were shown a set of sixty slides of pollution accompanied by a narrative contrived to conflict with the visually presented stimuli. Forty-seven subjects in the control group were shown the same set of sixty slides accompanied by a narrative contrived to agree with the visually presented stimuli.

Attitudes toward pollution were measured by means of an assessment instrument adapted after the Likert scale (1932). Attitudes of both groups toward pollution were measured six weeks before presentation of the stimuli and again one day after presentation of the stimuli. The data were analysed using an analysis of variance design. Results showed no significant differences ($F = .028$, $P \geq .05$) between the two groups. These results failed to reject the null hypothesis at the 0.05 level of significance.

The Student's "t" test computed using the before-and-after design was computed for the experimental and control groups. The results showed significant differences to exist for both groups.

Dejarnette, James Edward (Psychology, June, 1971)

HYPNOTIC SUSCEPTIBILITY AND RELIGIOUS EXPERIENCE

The Harvard Group Scale of Hypnotic Susceptibility was administered to 185 volunteers for hypnosis research at West Georgia College. Twenty three students scoring between 0-4 and 26 scoring between 10-12 were given a questionnaire designed to elicit information regarding their religious background and experiences, and follow-up interviews were conducted with students who professed to have undergone a salvation or conversion experience. Low hypnotic susceptibility was associated with perceiving one's mother as slightly religious or not religious ($p. < .05$), and with being either a Roman Catholic or a "saved" Protestant ($p. < .01$). When interviewed, all of the high-susceptible group who professed having been "saved" reported that the experience had been characterized by profound experiential phenomena, while changes of a similar magnitude were reported by none of the low-susceptible group.

Grant, Daniel Hicky (Psychology, June, 1971)

AN EVALUATING SURVEY OF *THE CENTER*, A TAX-SUPPORTED DRUG REHABILITATION FACILITY IN SAVANNAH, GEORGIA

The purpose of this research was to evaluate The Center, the only tax-supported drug rehabilitation facility in Georgia. A history of The Center is given describing incidents which affected change as well as programs and how they have transformed into the present approach to drug abuse. A questionnaire survey provided a history of the clients as well as obtain a client evaluation of The Center. The survey also gave a descriptive breakdown of the family situation including socio-economic level, parents use of drugs, family cohesiveness and other important factors. Weaknesses of the Center were pointed out and recommendations were made to strengthen the program.

Odom, James Childs, Jr. (Biology, June, 1971)

THE EFFECT OF BLUE WAVELENGTHS OF LIGHT ON ALTERING THE SEX RATIO OF HAMSTERS

The purpose of the investigation was to determine whether or not blue wavelengths of light are effective in altering the sex ratio of hamsters from normal. To this end two environmental chambers, or environators, were used. In one, the experimental chamber, a blue filter was used which transmitted light in the range of 420-555 nanometers (nm) with 64% transmission. The other, the control chamber, was fitted with a plastic nondeteriorating filter, which transmitted 76% of the light without peaks from 300 nm past far red. The photoperiod was set in both chambers at 10 hours of darkness and 14 hours of light. Into each environator was placed four brother-sister pairs of virgin hamsters which were chosen in a random fashion from litters having at least two males and two females. Each pair of hamsters in the experimental chamber were litter-mates with a pair in the control chamber. The experiment ran from late summer until December 31, 1970. Statistical analysis of the results was carried out using the G-adjusted test for goodness of fit and a two by two test of independence using the adjusted G-statistic. The results of the test for goodness of fit indicated that the sex ratio of the experimental chamber hamsters deviated significantly from that of the control chamber hamsters. The test of independence, however, revealed no relationship between treatment and sex. On the basis of this last test the null hypothesis that light has no effect on sex ratio in hamsters was accepted.

Smith, Gerald Judson (English, June, 1971)

THE AGRARIAN THOUGHT OF JOHN DONALD WADE

John Donald Wade, a member of the Nashville Agrarians, a contributor to the 1930 symposium *I'll Take My Stand: The South and The Agrarian Tradition*, author of the definitive biography of Augustus Baldwin Longstreet and a number of other items, had distinctive ideas about the relation of the South to the modern world. This thesis delineates Wade's ideas about the South and the modern world: He felt that modern industrialism had become a quasi-religion, lauding two demigods, Speed and Mass. He thought that these gods were rushing the nation into complete mechanization and ruin. Wade believed that the agrarian, while unable to proscribe industry totally, must keep alive the amenities of life in the face of these dehumanizing demi-gods; a perpetuation of the Southern or Agrarian tradition would serve as a barrier to such an eventuality.

Cooper, Sidney Ross (Psychology, August, 1971)

LOWERING THE AUDITORY THRESHOLD WITH HYPNOSIS

Forty-eight subjects scoring six or above on the Harvard Group Scale of Hypnotic Susceptibility were administered a Beltone Audiogram as an initial base-line measure of hearing acuity. They were then randomly divided into four groups of twelve. Group I was given no experimental treatment before being re-tested. Group II was given only a standard hypnotic induction. Group III was hypnotized and requested to "try to hear better" before being re-tested under hypnosis. The subjects in Group IV were hypnotized and given suggestions to the effect that their hearing acuity on the post-test measure would be greatly enhanced under hypnosis.

All groups manifested a significant decrease in post-test auditory thresholds as an effect of practice. Groups III and IV manifested a greater decline in threshold than did Groups I and II; and this decline was greater for Group IV than for Group III. Group II, however, manifested a significantly *greater* post-test auditory threshold than did Group I.

The results support the conclusion that the auditory threshold may be lowered by means of hypnotic suggestion. Implications of the present findings for hypnotic theory are discussed, and suggestions for future research are indicated.

DePhillippo, Samuel M. (Psychology, August, 1971)

THE PROCESS OF A GROUP MAKING ITS OWN UNCONSCIOUS

The creating of a group unconscious is a phenomenon which occurs whenever a group fails to observe and notice its own patterns of participation which, nevertheless, shape and affect the future movement of the group process. The process of a group which creates its own unconscious is neither a theory nor a belief, but rather, is a process which is directly observable in a group's patterns of participation. As the group creates its own unconscious, everything in the group context feeds into the unconscious, imprisoning the group in its very patterns which it is not noticing. The group unconscious as an on-going process is a new dimension for exploration of an area that is in great need of simplification and refinement.

A number of examples will be presented which will signify the process of the group unconscious. An elaborate description of gossip in relation to the process of the unconscious will illustrate a more universal process operating in groups. The effects of the group unconscious upon our individual lives outside the group are far-reaching and influential when the individual fails to observe his group participation. The personal unconscious may be the results of the group unconscious which has affected us without our awareness.

Downing, Theodore Douglas (Psychology, August, 1971)

THE PSYCHOLOGY OF MUSIC AS ENTERTAINMENT

This thesis examines 81 popular songs chosen by the listeners of an AM radio station in Atlanta as the most popular songs of 1970. As a means of examining the communication of the songs, special attention is given to the values expressed in them. The relationship of values to pleasure and pain is explored, and the nature of suffering reflected in the songs is examined. Two processes of listening—listening for pleasure and listening to learn—are examined, and the nature of entertainment is questioned. Attention is paid to the concept of morbid and healthy suffering in relation to music, and it is questioned whether the songs have potential to promote good health in the listener. Finally, an examination of the healthy and the unhealthy songs is enlarged to include the entire realm of music.

Forsyth, Charles Frederick (Psychology, August, 1971)

COGNITIVE HETRODYNING

Twelve female subjects who were highly hypnotizable and capable

of attaining an age regression with revivification of previous experiences under hypnosis were utilized in this experiment. The purpose was to determine whether by the use of a special hypnotic technique called cognitive hetrodyning, the subjects would be able to improve their scholastic achievement.

Under deep hypnosis, the subjects were given suggestions aimed at producing a state of extremely pleasant affect. This was then related to the attainment of a specific, previously agreed upon scholastic goal, such as attaining the dean's list or graduation with honors, by telling the subjects that they would feel just this good again when the goal was achieved.

Pre-test and post-test measures were obtained on the French Test of Insight, a projective test designed to measure achievement motivation, and the 16 P.F. Test, a comprehensive factor-analytic personality profile. The results of the experiment indicated no significant increase between pre-test and post-test scores on the French Test of Insight. However, there was a significant increase in the ego strength factor of 16 P.F. Test ($p. = .005$), and a significant decrease in the ergic tension factor on this test ($p. = .005$). A follow-up investigation of the subjects' scholastic performance is planned.

Fountain, Howard W. (History, August, 1971)

PRINCE ALBERT AND THE GREAT EXHIBITION OF 1851

The British people turned their attention to Hyde Park on May 1, 1851. Great Britain had invited the nations of the world to a festival of peaceful competition called the Great Exhibition. Prince Albert, a man of pre-eminent wisdom, of philosophic mind, and with the power of leadership, had placed himself at the head of the enterprise and led it to a triumphant success.

The Great Exhibition was a success because its purpose meant many things to many people. It reflected the main influences upon mid-Victorian Britain in 1851: prosperity, progress, national pride, and trust in British institutions. The Exhibition unified such divergent undercurrents as the Free Trade Movement, concern for the working classes, educational reform and the world peace movement into a solid base of support. Many of the Victorian ideas seem guileless by today's standards, but in 1851 anything seemed possible. A decade of monumental progress gave a prince and his subjects the confidence that they could do the impossible.

Joseph Paxton was entrusted with the design and construction of the Exhibition building. He and his contractors created a miracle in Hyde Park. The Crystal Palace, as it came to be called, was an architectural wonder. It was the first large structure ever built from prefabricated parts of iron and glass.

The fascinating exhibits drew such numbers of visitors that the Great Exhibition became a success beyond the wildest dreams of its promoters. It proved the predictions of critics to be totally wrong. Over 6,000,000 visitors came to the Crystal Palace during its 140 admittance days. Every exhibit seemed to please, astonish, and bewilder the visitor by its range and magnificence. Few visitors went away disappointed.

The Great Exhibition was more than a public and financial success. It made genuine contributions to industrial technology, architectural and artistic design, technical education, and the welfare of the laboring classes. The Great Exhibition was more than a show. It was a unique event, the first of the world's fairs. Its imitators are little remembered because they left little that was lasting whereas the Great Exhibition continued to benefit Great Britain. All things considered, Prince Albert had done well by his adoptive country.

Hobgood, Larry Gene (Biology, August, 1971)

A STUDY OF HETERCHROMIA IN THE SYRIAN HAMSTER

Heterochromia was studied in the amber-gold belted Syrian hamster *(Mesocricetus auratus auratus).* Specific phenotypic crosses were made and the inheritance of heterochromia was investigated. These crosses yielded 267 progeny of which 72 were heterochromic. A genetic model was proposed for the inheritance of heterochromia based on both recessive and dominant epistatic relationships among four gene pairs. In addition, structural observations revealed a severe reduction of choroidal pigmentation in the affected eye of the animal showing heterochromia.

Kennedy, William D. (Biology, August, 1971)

NUTRIENT AND SUBSTRATE CONDITIONS FOR THE GROWTH OF *ANABAENA IN VITRO*

Since *Anabaena* is frequently a problem in water supplies and ground waters, a study of its growth requirements was considered desirable. *Anabaena wisconsinense* Prescott was cultured in Bold's Basal Medium. Subsequent modifications of the nutrient medium and the provision of a solid substrate on which it could grow supported more vigorous growth of the alga. Variations in nitrate and phosphate concentration did not influence growth.

Maddox, Jerry M. (Biology, August, 1971)

ULTRASTRUCTURAL VARIATION IN LIVER MITOCHONDRIA OF THE HOMOZYGOUS GREY-LETHAL (gl/gl) MOUSE

An electron microscopic study was carried out on liver tissue from six normal and four homozygous grey-lethal (gl/gl) mice to determine if ultrastructural differences existed in mitochondria and other cell features. The mean sizes of mitochondria from mutant mice were larger than those of normal mice of the corresponding age. Glycogen content appeared less in grey-lethal mouse liver than in normal mouse liver. Significance of these findings is discussed in relation to parathyroid hormone, calcium and the pleiotropic activity of the gl gene.

Norris, Trudy Peterson (English, August, 1971)

A STUDY OF REGIONALISM AND FLANNERY O'CONNOR: TWO SOUTHERN CHARACTER TYPES

Regionalism, a literary movement long in maturing, began early in the history of America and evolved through several literary stages, continually broadening its scope to encompass America's hopes for a comprehensive national literature. The ascendancy of regionalism has passed from one section to another to have now established its center in the South, the home of some of the most penetrating twentieth-century writers in America, almost all of whom have aligned themselves with this movement in their use of the concrete particulars of the life around them to penetrate the mysteries of mankind. One of these is the Georgia author, Flannery O'Connor.

In her two volumes of short stories, *A Good Man Is Hard to Find* and *Everything That Rises Must Converge*, and her two novels, *Wise Blood* and *The Violent Bear It Away*, Miss O'Connor has succeeded in transmitting her theological vision of reality through using the actualities of her region, particularly through the use of two Southern character types: the backwoods prophet and the Southern matron. The backwoods prophet in his religious obsession and the Southern matron in her gentility are Southern character types. Their basic regional quality is their dialect through which their social class, prejudices, and indeed the condensed history of the South is presented. However, through these two character types Miss O'Connor presents more than the South: she presents mankind—mankind in relation to God.

Reese, Anna Eller (Biology, August, 1971)

THE FLORAL MORPHOLOGY AND EMBRYO SAC DEVELOPMENT OF *NANDINA DOMESTICA*

An examination of the gross morphology of floral parts together with a microscopic study of the pistil and ovule of *Nandina domestica*

Thunb. revealed that the flowers are complete, actinomorphic and hypogynous. The perianth is composed of thirty to thirty-six caducous sepals and six petals. The anthers are basifixed and four-celled, form tetrahedral microspore tetrads, and dehisce longitudinally. The pistil has a two- or three-lipped stigma, a style with canal containing transmission tissue, and an ovary with a single parietal placenta containing two to three anatropous ovules. The ovules are bitegmic and crassinucellar and contain a Polygonum embryo sac. The presence of a hypostase and endothelium in the ovule was noted. The paraffin embedding technique was utilized for microscopic study and sections were microtomed at 12 microns.

Shapiro, Harvey Lee (Psychology, August, 1971)

AN EXPERIMENTAL MATHEMATICS PSYCHOLOGY PROGRAM

This paper is a study of an experimental mathematics psychology program taught by two professors during the Fall 1970 at West Georgia College. The purpose of this curriculum was to help students adapt and live in our rapidly changing world. The professors used several techniques. First, they proposed to break down the compartmentalizing of subjects by jointly teaching mathematics and psychology. Second, they expected to apply psychology practically to mathematics; to be able to discuss and gain understanding as to why people are afraid of mathematics. Finally, they planned to use psychological techniques to help students learn mathematics. They then discussed the psychological techniques and why they did or did not work. Both professors remained in the classroom for a two hour period each day. A mathematics graduate student and a psychology graduate student assisted in the teaching and grading. The students were expected to master the materials to a point of confidence where if it were taught in the traditional way they would have received an "A" in the course.

The results of the mathematics psychology experiment are mixed. Since this was an experimental program, much time and energy was spent in preparation of the material and in discussions as to how it should be presented. The professors involved felt that the teaching of an experimental mathematics psychology, or any science area with psychology, is an extremely good idea but that only one professor need teach the two classes and that the students should have the goals and aims of such a program clearly explained. This type of program could be advantageous to both the faculty member and to the students. Unfortunately there is no known way to measure accurately the advantages gained by both.

Suh, Jimoon (English, August, 1971)

STATUES AGAINST THE SKY: VIRGINIA WOOLF'S CONCEPT OF LIFE AND INDIVIDUALITY AS SHOWN IN *THE WAVES*

Virginia Woolf's *The Waves* is not an incoherent and illogical experiment in a new form, as has been supposed by some. Instead, it is a sincere attempt to understand human life from its very source. The descriptive passages in italics provide parallelism between human life and the universal cycle of cessation and continuation, thus enlarging the horizon from a man-centered world on to the cosmos. The monologues by six characters, which make up the body of the book, reveal the characters' personalities and their relationship to each other and the world. The form, though rigid, is a fitting vehicle for the content. Through the highly regulated monologues of her fictional characters, Mrs. Woolf explores the cause of individual isolation from the core of the problem.

The six characters, Neville, Louis, Bernard, Susan, Jinny and Rhoda, each have different sensitivities, different ideas about and reactions to the world and different modes of personal fulfillment. Since the characters thus differ, isolation is inevitable for them. However, when people are willing to sacrifice a portion of their insistent ego, they can have a moment of complete union. The significance of the silent seventh character, Percival, is that he is a unifying force because, being a "naturally truthful" person, he has no ego to indulge in or insist upon. His influence, therefore, is creative. The six characters represent the variety of human personalities, and their isolation and union are symbolic of those of all men. *The Waves*, however, is not a lamentation for the separation of human beings but a penetrating study of the cause and result of men's isolation, which is the condition of all human existence.

Wash, Lee W. (Biology, August, 1971)

BIOCHEMICAL AND ULTRASTRUCTURAL STUDIES OF A PIGMENT-DEFICIENT MUTANT OF SOYBEAN, *GLYCINE MAX* (L.) MERRILL

Comparison was made of ultrastructural and pigment differences among the three phenotypes of the Y_{11} locus in soybean, *Glycine max* (L.) Merrill.

The heterozygote, $Y_{11}y_{11}$, had about 35% of the normal chlorophyll content; the homozygous mutant, $y_{11}y_{11}$, had about 4% of the normal. Etiolated plant cells showed normal prolamellar body structure in all phenotypes, while the light-grown plants showed sharply decreasing grana formation or stacking in the lamellae. The Y_{11} locus is apparently involved in the conversion of protochlorphyll (ide) to chlorophyll *a*.

McMichael, Herbert Walter (Psychology, December, 1971)

TOWARD A PSYCHOLOGY OF LISTENING

This paper is concerned with the phenomenon of the inner voice of wisdom and the way in which we listen to it. The paper explores the psychology of listening through a poem and an artistic expression and shows that within the clear statement of a problem lies the solution. It also shows that the inner voice makes this statement in order to provide oneself with the necessary avenues to understand the problem and facilitate psychological balance. Lastly, the paper claims that the way we listen to ourselves is the way we listen to others. This state of consciousness, therefore, shapes the world within and outside of us.

Nielsen, Roger Knight (Psychology, December, 1971)

CREATIVITY AND INNOCENCE

This thesis was an experiential one, which means that the author relied primarily upon his insights and observations in his examination of creativity and innocence. Innocence is fundamental to creativity; to be innocent means to die to the past and to the future. When one understands the obstacles to his innocence, he can get in touch with it. In this way we can understand and break free from conditioning.

Insights are also fundamental to creativity. The cultivation of one's insights leads one to a state of freshness and innocence. Each of us is born with innocence, therefore each of us has the ability to be creative simply by getting in touch with our innocence.

Payne, John Lewis, Jr. (Psychology, December, 1971)

TEACHER-COUNSELOR CARING: ITS EFFECT ON THE ACHIEVEMENT AND GROWTH OF HIGH-RISK JUNIOR COLLEGE STUDENTS

The influence of personal interest and attention on the academic performance of 49 first semester low-achieving junior college freshmen was measured by comparing GPA's, before and after the test period, with a control group of 49 students who had a comparable initial academic standing. Students in the test group were given individual counseling, tutorial and remedial study help, encounter group experience, and participation in cultural exposure opportunities. The investigation hypothesized that all of these forms of attention would be experienced by the student as care and concern both for his life and for his success in college, and that he would improve in his academic standing and show signs of personality growth. Results show a positive relationship.

Barker, Nancy L. (Guidance and Counseling, August, 1971)

GROUP GUIDANCE WITH EIGHT DEAF STUDENTS

Eight deaf teenage girls from the Georgia School for the Deaf participated in six weeks of group guidance. The objectives of the group were:

1. To keep students from being suspended because of behavior problems.
2. To keep students' names on the honor roll so that privileges would not be lost.
3. To help students realistically evaluate themselves.
4. To help students become more co-operative in the classroom/ dormitory.
5. To help students have a better relationship with their parents.
6. To help students develop more socially acceptable behavior.
7. To aid students in money management.
8. To help students increase understanding on subjects of their interest.

The results were that all eight students were in school, were not suspended at the end of the six weeks, and were on the honor list. It was concluded that the students did not realistically evaluate themselves and there was little improvement in the area of co-operativeness. It was difficult to evaluate whether students had improved their relationship with their parents since all of the parents lived a great distance from the school. There was improvement in the area of socially acceptable behavior and money management.

In case studies done on each of the group members it was evident that behavior problems can easily be detected in the primary grades. These problems should be dealt with by a qualified counselor in these formative years. Group work with deaf teenagers should be limited to not more than five members.

Chapman, Thomas J., Jr. (Guidance and Counseling, August, 1971)

THE EFFECTS OF USING ROLE PLAY IN A GROUP TO IMPROVE INTERPERSONAL RELATIONSHIPS AND SELF-ESTEEM

This study examines the relationship of one's self perception (actual-ideal) before and after participation in group sessions using role-play. Eight junior high school students reported their perceived self and ideal self concepts using the Self-Ideal Ordinary Q Sort. The students perceived themselves with increased self esteem after the sessions, and there was significantly less incongruence between the self and ideal-self concepts.

Hodges, Coy L. (Guidance and Counseling, August, 1971)

A STUDY OF THE RELATIONSHIP OF THE STATE BOARD EXAMINATION SCORES FOR PRACTICAL NURSES AND LEARNING ABILITY SCORES ON THE GENERAL APTITUDE TEST BATTERY

This study established a correlation coefficent between State Board Examination Scores and Learning Ability Scores (G) on the General Aptitude Test Battery (GATB) among practical nursing graduates of an area vocational-technical school. A significant correlation of .56 was found. A regression table was formulated to predict State Board Scores from the (G) Scores on the GATB.

McClure, Barbara K. (Guidance and Counseling, August, 1971)

HELPING TEACHERS BECOME AWARE OF THE DEVELOPMENTAL NEEDS OF CHILDREN

This study sought to sensitize teachers (subjects) to the relationship between a child's development and his readiness for learning by presenting and discussing the developmental stages of children and how these stages can enhance or impede a child's readiness for learning. To reinforce these concepts each subject was taught, through demonstration, how to administer and evaluate a developmental readiness test. The subjects administered and evaluated three hundred tests and, in follow-up discussions, vocally expressed increased awareness and understanding of child development.

Webb, Martha G. (Guidance and Counseling, August, 1971)

THE SHORT-TERM EFFECT OF READING, DEVELOPMENTAL ENGLISH, AND GROUP AND INDIVIDUAL GUIDANCE ON THE SELF-CONCEPT OF NINTH-GRADE COMMUNICATION-SKILL DEFICIENT STUDENTS IN A RECENTLY INTEGRATED HIGH SCHOOL

The short-term effect of group and individual guidance on four classes of 71 ninth-grade communication-skill deficient students in a recently integrated school was explored, with the Piers-Harris Self Concept Scale as a pre- and posttest to determine, with *t* tests, the differences between the means of the control and experimental groups, at the critical value of .05. Although no significant differences existed in original permutations, there were indications (confirmed by subsequent *t* tests with increase, no increase or decrease scores) that reading affected change in some students, leading to the conclusion that a failure to affect a student positively had a negative effect on self-concept.

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The purpose of this publication is to provide encouragement for faculty research and to make available results of such activity. The *Review,* published annually, accepts original scholarly work and creative writing. West Georgia College assumes no responsibility for contributors' views. The style guide is Kate L. Turabian, *A Manual for Writers.* Although the *Review* is primarily a medium for the faculty of West Georgia College, other sources are invited.

An annual bibliography includes doctoral dissertations, major recitals and major art exhibits. Theses and articles in progress or accepted are not listed. A faculty member's initial listing is comprehensive and appears in the issue of the year of his employment. The abstracts of all master's theses and educational specialist's projects written at West Georgia College are included as they are awarded.

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WILLIAM FAULKNER ON INDIVIDUALISM

By JAMES DAHL*

William Faulkner has been dead now for nearly eleven years; he died at the age of 65 on July 6, 1962, of a heart attack. His novels and stories continue to be very popular with teachers and students alike. His thoughts on the plight of the modern individual are less well known than his fiction.

One must understand from the outset that William Faulkner was in no sense an academic philosopher. He quit high school at sixteen and never returned for a certificate. He did study Spanish and French at Ole Miss in 1921 and 1922, but took no more than a course or two for three semesters. Thus, it is not surprising that Faulkner in his speeches and essays should have a rather marked distaste for intellectual systems and academe in general. At the University of Virginia, where he was Writer in Residence in 1957 and 1958, Faulkner told one audience, "I don't have much confidence in the mind. I think that it is here [in the heart] where the shoe fits, that the mind lets you down sooner or later, but this doesn't."[1]

For Faulkner the human heart is the seat of the most basic of human conflicts. This idea is central to Faulkner's often quoted Nobel Prize speech, in which Faulkner urged young writers to concentrate on "... the problems of the human heart in conflict with itself which alone can make good writing because only that is worth writing about, worth the agony and the sweat."[2] In 1955, at Nagano, Japan, in a cultural interchange arranged by the U.S. Department of State, Faulkner was more specific about the conflict between instinct and conscience:

> Yes, man, his instinct, wants to hold on to what he has at any price. It takes his conscience to tell him. "You must relinquish some of this," but his instinct, his nature says, "Hold it, you got it, it's yours, it's mine, I want it, I've got it, so I can keep it." That's not anything to be at all proud of, but since it is his nature, I would not apply the word base to that, but when he pretends that his reason for that is some high moral one, then that is baseness.[3]

In this regard one is reminded of Faulkner's contention that the race problem in the American South is basically an economic one—the

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[1] William Faulkner, *Faulkner in the University*, edited by Frederick L. Gwynn and Joseph L. Blotner (Charlottesville: The Universtiy of Virginia Press, 1959), p. 6.

[2] William Faulkner, *The Faulkner Reader* (New York: Random House, 1954), p. 3.

[3] William Faulkner, *Faulkner at Nagano* (Toyko: The Kenkyusha Press, 1956), pp. 100-1.

majority of Southerners simply do not wish to give up their profits from cheap Negro labor.

At the University of Virginia, Faulkner was asked how he defined man's basic idealism and what proof of its existence he could find in human behavior. His answer is the most succinct of his many statements about the nature of man: "I think that man tries to be better than he thinks he will be. I think that that is his immortality, that he wants to be better, he wants to be braver, he wants to be more honest than he thinks he will be and sometimes he's not, but then suddenly to his own astonishment he is."[4] Faulkner went on to state that man often has great difficulty in making progress against his own selfish nature, but that ". . . the desire to be better than he is afraid he might be is inside him, inside his conscience."[5] At Nagano, Faulkner pointed out several instances of moral progress in recent times:

> "Now [man] changes his condition gradually. Nowadays, a little child doesn't have to work; nowadays, a merchant can't sell you poisoned soup. That's something, that's not much of an advancement, but it's something. For I do believe in man and his capacity for advancement. I still believe in man. That he still wishes, desires, wants to do better than he knows he can and occasionally he does a little better than anybody expects of him.[6]

At Nagano, Faulkner was asked point-blank whether he believed in Christianity. His answer was,

> Well, I believe in God. Sometimes Christianity gets pretty debased, but I do believe in God, yes, I believe that man has a soul that aspires towards what we call God, what we mean by God . . . I think that the trouble with Christianity is that we've never really tried it yet, but we must use it—it's a nice glib tongue but we have never really tried Christianity."[7]

At the University of Virginia, Faulkner was asked about his personal stance toward Christianity:

> Why, the Christian religion has never harmed me. I hope I have never harmed it. I have the sort of provincial Christian background which one takes for granted without thinking too much about it, probably. That I'm probably—within my rights—within my own rights I feel that I'm a good Christian—whether it would please anybody else's standards or not I don't know.[8]

In Japan and at Virginia, Faulkner was very outspoken in his denunciation of the dehumanizing elements in contemporary society. The greatest ideological evil of present times, Faulkner told a group of

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[4] Faulkner, *Faulkner in the University*, p. 85.

[5] *Ibid.*, p. 86.

[6] Faulkner, *Faulkner at Nagano*, pp. 5-6.

[7] *Ibid.*, p. 242.

[8] Faulkner, *Faulkner in the University*, p. 203.

young writers at Virginia, is the marked decline of man's faith in himself as an individual:

> This is the mystical belief, almost a religion, that individual man as individual man can no longer exist. A belief that there is no place anymore where individual man can speak quietly to individual man of such simple things as honesty with oneself and responsibility toward others and protection for the weak and compassion and pity for all, because such individual things as honesty and pity and responsibility and compassion no longer exist and man himself can hope to continue only by relinguishing and denying his individuality into a regimented group of his arbitrary factional regimented group, both filling the same air at the same time with the same double-barreled abstractions of "people's democracy" and "minority rights" and "equal justice" and "social welfare"—all the synonyms which take all the shame out of responsibility by not merely inviting but even compelling everyone to participate in it.[9]

In the seminar with Japanese writers and intellectuals at Nagano, Faulkner emphasized again and again the importance of individual action and individual thought: "It's that single voice that's the important thing. When you get two people, you still got two human beings; when you get three you got the beginning of a mob. And if you get a hundred all focused on one single idea, that idea is never too good."[10]

This challenge to human beings to act individually and not collectively was the keynote of two speeches Faulkner made, the first at his daughter Jill's graduation from University High School in Oxford, in 1951, and the second two years later at her graduation from Pine Manor Junior College in Massachusetts, in 1953. At Oxford, Faulkner gave a six-minute speech, which, though little known, is of the same quality and stamp as his Nobel Prize acceptance speech. To his daughter and her classmates, Faulkner said,

> What threatens us today is fear. Not the atom bomb, nor even fear of it, the being afraid of it. Our danger is not that. Our danger is the forces in the world today which are trying to use man's fear to rob him of his individuality, his soul, trying to reduce him to an unthinking mass by fear and bribery—giving him free food which he has not worked for—the economics and ideologies or political systems, communist or socialist or democratic, whatever they wish to call themselves, the tyrants and the politicians, American or European or Asiatic, whatever they call themselves, who would reduce man to one obedient mass for their own aggrandizement and power, or because they themselves are baffled and afraid, afraid of, or incapable of, believing in man's

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[9] *Ibid.*, p. 242.

[10] Faulkner, *Faulkner at Nagano*, p. 29.

capacity for courage and endurance and sacrifice.[11]

The threat of totalitarian systems of thought, Faulkner told the graduates, will not be effectively combated by group action; it can be met only by individuals ". . . who will believe always not only in the right of man to be free of injustice and rapacity and deception, but the duty and responsibility of man to see that justice and truth and pity and compassion done.[12] And Faulkner's final challenge to the high school graduates was to show courage in the face of societal pressures:

> So never be afraid. Never be afraid to raise your voice for honesty and truth and compassion, against injustice and lying and greed. If you, not just you in this room tonight, but all the thousands of other rooms like this one about the world today and tomorrow and next week, will do this, not as a class or classes, but as individuals, men and women, you will change the earth.[13]

The Pine Manor address was printed in the *Atlantic* several months after Faulkner delivered it in Massachusetts in June of 1955. The speech is entitled "Faith or Fear," and as in the Oxford address, the emphasis is on the individual's choice between spiritual freedom or slavery. At the outset, Faulkner emphasized his idea that what is wrong with the world is that it is not yet finished, that God gave man ". . . the choice between ending the world, effacing it from the long annal of time and space, and completing it."[14] At present, Faulkner continued, the forces of slavery and conformity are stronger than ever before in our history. He urged that his audience and he begin at once ". . . to work, to begin to change, to begin to rid ourselves of the fears and pressures which are making simple existence more and more uncertain and without dignity or peace or security, and which, to those who are incapable of believing in man, will in the end rid man of his problems by ridding him of himself."[15] "In fact," he concluded, "we must break ourselves of thinking in the terms foisted on us by the splitoffs of that old dark spirit's ambition and ruthlessness: the empty clanging terms of 'nation' and 'fatherland' or 'race' or 'color' or 'creed."[16] Only when this is done will the dark forces of slavery admit defeat, admit that "Man—simple unfrightened invincible men and women—has beaten us"[17]

In a letter to the editor of the New York *Times* in 1954 and in an article in *Harper's* magazine in 1955, Faulkner delivered two more warnings of a somewhat different nature concerning present-day threats

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[11] "Fear Threatens Man's Individuality; Faulkner Challenges UHS Graduates: 'Never Be Afraid,'" *The Oxford Eagle*, May 31, 1951, p. 53.

[12] *Ibid.*

[13] *Ibid.*

[14] William Faulkner, "Faith or Fear," *Atlantic*, CLXXXII (August, 1953), p. 53.

[15] *Ibid.*, p. 55.

[16] *Ibid.*

[17] *Ibid.*

to individuality. The *Times* letter concerned the 1954 crash in New York City of an Italian airliner whose instruments failed to hold the glidepath in landing.[18] In his letter Faulkner contended that the pilot and those aboard were not just the victims of that instrument failure, but also ". . . of that mystical, unquestioning, almost religious awe and veneration in which our culture has trained us to hold gadgets—any gadget, if it is only complex enough and cryptic enough and costs enough."[19] Faulkner reasoned that the pilot had been afraid to use his own judgment in landing the plane, even after two unsuccessful passes at the airfield, for fear of violating modern man's worship of mechanical devices.[20] And, Faulkner concluded, "We had all better grieve for all people beneath a culture which holds any mechanical device superior to any man simply because the one, being mechanical, is infallible, while the other, being nothing but man, is not subject to failure but doomed to it."[21]

The *Harper's* article, "On Privacy . . . The American Dream: What Happened to It," is an account of Faulkner's firsthand experience with the modern individual's helplessness in protecting his own privacy. The article is a stinging denunciation of a reporter and his editors, who, against Faulkner's expressed wishes, printed a story about his personal life in a national magazine.[22] Faulkner undoubtedly had in mind two articles, with pictures, which *Life* magazine printed about him in September and October of 1953. The point of Faulkner's anger is that at present the individual is helpless against any large organization or group which would profit from violating his privacy, because the modern organization has no moral compunctions, and, on the practical side, would rather pay damages in a libel suit than give up the chance for prestige or profit.[23] Faulkner concluded the article with this warning:

> With odds at balance (plus a little fast footwork now and then of course) one individual can defend himself from another individual's liberty. But when powerful federations and organizations and amalgamations like publishing companies and religious sects and political parties and legislative committees can absolve even one of their working units of the restrictions of moral responsibility by means of such catch phrases as "Freedom" and "Salvation" and "Security" and "Democracy," beneath which blanket absolution the individual salaried practitioners are themselves

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[18] William Faulkner, "Letter to the Editor," New York *Times*, December 26, 1954, Section 4, p. 6.

[19] *Ibid.*

[20] *Ibid.*

[21] *Ibid.*

[22] William Faulkner, "On Privacy . . . The American Dream: What Happened to It," *Harper's* CCXI (July 1, 1955), 33.

[23] *Ibid.*, p. 36.

freed of individual responsibility and restraint, then let us beware.[24]

At Virginia in 1958, Faulkner delivered these remarks about the pernicious influence of organizations:

> Yes, I have very definite ideas about that, and if I ever become a preacher, it will be to preach against man, individual man, relinquishing into groups, any group. I'm against belonging to anything. Of course, when I was young I belonged to young people's fraternities and things like that, but now I don't want to belong to anything except the human race . . . I think that there's too much pressure to make people conform and I think that one man may be first-rate but if you put one man and two second-rate men together, then he's not going to be first-rate any longer, because the voice of that majority will be second-rate.[25]

At this point it is interesting to examine the relationship between Faulkner the artist and Faulkner the individualist. In a speech entitled "To the Youth of Japan" in 1955, Faulkner outlined the role of art in fostering individualism: "... art is the strongest and most durable force man has invented or discovered with which to record the history of his invincible durability and courage beneath disaster, and to postulate the validity of his hope."

At Virginia, Faulkner singled out J.D. Salinger's *The Catcher in the Rye* as the finest modern novel he had read. As a first-rate work of art, Faulkner said, Salinger's novel is a potent means of saving mankind "... from being desouled as the stallion or boar or bull is gelded, to save the individual from anonymity before it is too late and humanity has vanished from the animal called man."[27] It is the artist who is the est advocate of individualism "... since who should fear the loss of [individuality] more, since the humanity of man is the artist's life blood."[28]

However, Faulkner is no facile optimist who sees the artist's task in modern times as an easy one. In Japan he told several audiences of writers that these are indeed dark times for the artist.[29] Over the long haul, however, Faulkner is optimistic about man's capacity for endurance and progress.

> . . . I am still convinced that man is tougher than any darkness. That man's hope is the capacity to believe in man, his hope, his aspiration toward a better human condition. The fact that man always hopes toward a better human condition. I think that the

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[24] *Ibid.*, p. 37.

[25] William Faulkner, *Faulkner in the University*, p. 269.

[26] William Faulkner, *Faulkner at Nagano*, pp. 186-7.

[27] William Faulkner, *Faulkner in the University*, p. 245.

[28] *Ibid.*

[29] William Faulkner, *Faulkner at Nagano*, p. 157.

purpose of writing, of art, is a record. The reason that the books last longer than the bridges and the skyscrapers is that that is the best thing man has discovered yet to record the fact that he does endure, that he is capable of hope, even in darkness, that he does move, he doesn't give up, and this is not only a record of his past, where he has shown that he endures and hopes in spite of darkness, but is a promise of the validity of that hope. That that is one thing in which he can show tomorrow that yesterday he endured. He knows that since his own yesterday showed him today that he endured, was capable of hope, was capable of believing that man's condition can be bettered, is his assurance that after he is gone someone will read what he has done and can see what man yesterday was capable of believing and of hope that man's condition does change. There are evils of yesterday that don't exist any more, the evils of today will be gone tomorrow by the advancement, women will have more freedom in this country than they had once. There will be a time when the older people that got the world into wars won't be able to get the world into wars any more for the young people to get killed in. That will come, it will take time, it will take patience, and it will take a capacity of people to believe that man's condition can be improved, not as a gift to him, but by his own efforts. That he can do it.[30]

In his last address at Virginia as Writer in Residence, in 1958, Faulkner summed up the fate of individual man and the role of the arts in this manner. The quotation serves as a fitting conclusion to this brief look at Faulkner the artist and Faulkner the individualist·

> Well, the individual is not too much, he's only a pinch of dust, he won't be here very long anyway, but species, his dreams, they go on. There's always somebody that will keep on creating the Bach and the Shakespeare as long as man keeps on producing.[31]

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[30] *Ibid.*, pp. 157-9.

[31] William Faulkner, *Faulkner in the University*, p. 286.

J.R.R. TOLKIEN'S MODERN FAIRYLAND

By GERALD M. GARMON*

I would like to argue that in the twentieth century the epic tradition is still very much alive, and that there are good examples to be found if we look within the boundaries of popular literature. Let me begin by mentioning the characteristics of the epic suggested by E.M. W. Tillyard.[1] "The first epic requirement is the simple one of high quality and of high seriousness." Secondly, it should have amplitude, breadth, inclusiveness, and the like. Thirdly, it should have organization and unity. The fourth requirement is called the Choric: "The epic writer must express the feeling of a larger group of people living in or near his own time." And lastly the epic "must have faith in the system of beliefs or way of life it bears witness to .... Only when people have faith in their own age can they include the maximum of life in their vision and exert their will-power to its utmost capacity." Lascelles Abercrombie[2] describes these last two in other terms; he thinks that the epic is often vulgar and provincial, shamelessly singing the praises of a conservative faith in morality and in a limited idea of heroic behavior. And let me add another quality found in most epics, and that is the reverence for and dependence upon nature.

It is necessary to stress the part that nature plays in epics, because it is seldom mentioned when epic characteristics are listed. Yet nature in some form or another serves as the controlling force in most of the epics of antiquity. In the Greco-Roman and Norse legends the gods and goddesses were qualities of nature personified. Inevitably the epic hero fought for the natural good and was supported in his struggle by the forces of nature; yet sometimes, too, the gods of nature worked against man.

Now, probably we cannot expect that within our times a poetic epic will be written which will fulfill the reasonable requirements of a long narrative poem which has a figure of heroic stature, a setting vast in scope, which covers great nations, has supernatural forces, a style of sustained elevation, and is at once glorifying traditional values and yet objective. But only the requirement that it be a poem diminishes that

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[1] E.M.W. Tillyard, *The Epic Strain in the English Novel* (London: Chatto and Windus, 1958), pp. 15-17.

[2] Lascelles Abercrombie, *The Epic* (Freeport, N.Y.: Books for Libraries Press, 1939), p. 11 and ff.

tradition in our time. And that is the only requirement that J.R.R. Tolkien's *The Lord of the Rings* lacks, yet it has much fine poetry within it. And this combination of prose and poetry is perhaps the best compromise with the poetic tradition that the twentieth-century reader will accept, but the lack of poetic structure should not be crucial to definition of the epic. The epic has been invented many times and independently; but as the needs which prompted the invention have been broadly, similar, so the invention itself has been.

Certainly, J.R.R. Tolkine intended to create his three-volume, six-book work as an epic. He borrowed from the Anglo-Saxon, the Icelandic and German traditions, from Sir Thomas Malory's *Morte d' Arthur,* Spenser's *Faerie Queene*, perhaps from Michael Drayton's *Nymphidia,* and Milton's *Paradise Lost.* And yet it is not essentially a derivative work, certainly not as much as *The Aeneid*, for example. And from the many sources and influences only two or three can be said to have major shaping force on its creation. They are the Anglo-Saxon epic works, the Arthurian tradition and the English soldier of the twentieth century. The others provide incidental images and stock characters or occasional motifs, but little more. And though there are echoes of the Greek, Roman, Italian, Norse and Portuguese epcis. it is primarily the English works, *Beowulf* and *The Faerie Queene*, that are its defining ancestors. This should remind us of another traditional characteristic of the epic, that the hero should be a national hero.

The hero of *The Lord of the Rings* is Frodo Baggins, a hobbit, who lives at Bag End, the Shire, Middle-earth, in a time incalculably distant, before the age of man. The hobbits are a likely choice for the heroes of a natural world because they live in the ground, are agrarian in their life style and generally close to nature. They are little people, standing about three feet tall, but with few of man's destructive habits. They have soft hair growing on the tops of their feet, thus they seldom wear shoes. They are shy, enjoy eating—up to six meals a day—they are naive, innocent, and provincial. They lack an interest in history but love to gossip and talk about family traditions. They are stay-at-homes, and they like to smoke pipes—a habit which they invented. They dislike change. In short they are in every way creatures of habit, which may explain their name. Their other salient qualities are endurance, toughness, loyalty and compassion. They stand as impressive answers to the charge of Joseph Wood Krutch and others who claim that modern man has lost faith in his own magnificence. But their greatness does not rest in preeminent skill in arms and grand appearance; it is in true courage. The courage to fight without faith but nonetheless for an ideal, to go on even to sure destruction. It is a courage that is not vested in being willing to give up a life that is superior to others, but in the willingness to make a mediocre life heroic by giving it up well and for a superior cause. The hobbit is a naturally sympathetic character, a half-sized Hector, a loveable type. Almost surely he represents the middle-class Englishman, the British Tommy of two

world wars who put down his work-a-day tools and fought against great odds to save the world from totalitarian forces. And he represents the English Tommy without being identified with the less heroic, mundane, and personal elements of our times. His small size magnifies the size of the enemy; and, perhaps most important, it urges us to believe that it is not by strength of arms that the world will be saved. Elrond, the elven king, says of Frodo,

> This quest may be attempted by the weak with as much hope as the strong. Yet such is oft the course of deeds that move the wheels of the world: small hands do them because they must while the eyes of the great are elsewhere. (I, 353)[3]

Despite its amazing creativity, its riot of deep traditional learning, *The Lord of the Rings* could not succeed without the hobbit, its finest and most endearing creation, an Everyman of heroic proportions.

In plot, as well as in its representative hero, *The Lord of the Rings* is epic in scope, variety and organization; at the same time it makes its appeal uniquely to the modern concern with pollution, war, and personal relationships.

Frodo Baggins is the nephew of Bilbo Baggins, who many years earlier had found a mysterious ring which had the power to make its wearer invisible. Under the guidance of Gandalf the Grey, a wizard, Bilbo—now a hundred and eleven years old—gives a farewell party, passes the ring on to Frodo and departs from the Shire. It is now that Frodo learns that his ring is the one made over a thousand years earlier by the evil wizard Sauron, who had lost his body when he lost the ring, but whose evil spirit has now gathered great strength and is about to launch a war of conquest on Middle-earth. He first wants to recapture his One Ring which will make him invincible. It is up to Frodo to carry the Ring back to the mountain in whose volcanic heat it was forged and destroy it there by the only force which can destroy it, before it turns all of the world into evil. But the Ring, which always gravitates back to its maker, has a will of its own and develops the evil in anyone who wears it until it destroys him.

Frodo is helped on his quest by his personal servant Sam, his two best friends, Merry and Pippin, an elf named Legolas, two men, Strider and Boromir, Gimli, a dwarf and the wizard Gandalf. They comprise the fellowship of the Ring. Gandalf falls into a bottomless pit while doing battle with an indefinable evil cloud called the Balrog. Boromir is killed by Orcs—a kind of robot created by Sauron; and Frodo, deciding that the Ring can be best returned by one person, leaves the rest to go on by himself. He does not count, however, on the indefatigable loyalty of Sam, who follows his master. Later Merry and Pippin are

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[3] J.R.R. Tolkien, *The Lord of the Rings* (New York: Ballantine Books, 1967). All references to Tolkien are to this text.

separated. And as Sauron begins his war, even without the Ring, the fellowship is widely scattered.

The breaking of the fellowship closes Book Two, or volume one. The remaining four books of the trilogy divide precisely in two parts. Books Three and Five belong to the Heroic Age, to great battles and individual heroics; Books Four and Six belong to the theme of the Quest, with the middle pages of Six bringing the two parts together again when the eagles, sent by Gandalf, rescue Frodo and Sam from the exploding Mount Doom. The last three chapters relate the cleansing of the Shire of the evil forces which had gathered there in Frodo's absence.

Now all of this suggests a rather traditional plot as epics go. There are the fantastic heroes of super-human abilities: Gandalf, Strider, Legolas, Gimili, and Boromir: the mysterious and inhuman enemy: the Orcs, Trolls, Ringwraiths, the giant spider Shelob, and Sauron himself, to mention a few; there is the quest to return the Ring, and thus to gain the great treasure of peace for Middle-earth. There are the unnatural escapes from death; for example, Gandalf the Grey returns from the dead as Gandalf the White. There are several descents into the underworld, and there is the dependence on nature and the powers of nature: things do not grow in Mordor the land of Sauron, they flourish in the land of the elves. The Ents, huge tree-like creatures who can command the trees, help the fellowship. Tom Bombadil is a pure spirit of nature, unaffected by evil, by temporal concerns, by even time. Birds talk to the elves; the eagles are servants of Gandalf. Certainly there is little possibility of the pathetic fallacy here; there are sentient wills in plants and rocks, and animals have nearly human intelligence.

In *The Lord of the Rings* nature is a controlling force, and if properly understood, it serves as a useful device for interpretation. It does not, however, present a simplistic dichotomy of good versus evil. At times the forces of nature seem to work against the success of the fellowship. Sauron seems to have power over nature, and at times so does Gandalf. But both evil wizards, Sauron and Suraman, pervert nature and destroy it. A key to the interpretation of Nature is found in the account of the dwarves in Moria. The dwarves are essentially good and in accord with Nature. But in bygone years they had mined for silver into the very heart of the mountain and in their greed they had unleashed the terrible Balrog. As a result they lost their wealth, their mountain home, and much of their skill as craftsmen. The Balrog has become an instrument of evil by the time the fellowship reaches the mountain, but originally he was a spirit of offended Nature. And offended Nature seems to be the pattern throughout the three volumes. The forests that hinder the heroes, the mountain that heaps snow in their path, the snakes that attack them are all responding to previous violations. Nature is essentially passive and good, but at times resentful and defensive because of past hurts. With this understanding of nature, we can try to understand several of the problems that readers have discovered.

One critical question which has bothered some critics, I have already attempted to explain within the idea of Nature as the definition of good, and that is, "why did Tolkien use the hobbit for his modern tale?" Two other problems which readers have been puzzled by are Tolkien's lack of treatment of religion and the disturbing sense of loss that pervades the whole work.

Too often critics have looked beyond the tale to the Catholic author and assumed a Christian foundation. I do not find it, and that may leave a few words such as *heathen* without much meaning, but they do not occur often. What I do find is a rather implicit belief on the part of the characters in a shaping force behind the affairs of Middle-earth but nothing so immediate as the gods of the Greeks nor the personal God of the Christians. It seems that Tolkien has gone back to the Nordic myths, to the early pre-Christian beliefs of the Teutonic peoples and their belief in Fate, a vaguely-comprehended notion of a power that not even the gods of the old polytheism could resist. All references to religion are so vague as to envoke those shadowy days before religion. One of these rare and typical references appears in a comment made to Frodo about Bilbo's finding of the Ring. Gandalf says,

> Behind that there was something else at work, beyond any design of the Ring-maker. I can put it no plainer, than by saying that Bilbo was *meant* to find the Ring, and *not* by its maker. In which case you also were *meant* to have it. (I, 88)

It is a foggy kind of teleology and is perhaps best described by the word "Nature."

To many readers another disturbing quality of the work is the sense of loss which pervades the later part of the work in particular; it is a sense of the dying out and fading away of the old ways and forms of life. It gives the epic the tone of a kind of modern Virgilian sorrow. Almost everything that is rational but non-human is fated to pass from Middle-earth with the ending of the Third Age. Already the Tree-like Ents are dying out because the Entwives have been lost for many years. With the destruction of the One Ring, the Three Elven rings lose their power and the Elves must pass on to the West. The Fourth Age of Middle-earth will be the age of Men, and from them the hobbits will hide and be reduced in number, so too will the dwarves. And since there is no Middle-earth within our history or geography, we must assume that it and its history vanished also, long ago, beyond man's memory. This sense of loss is dramatized further in the conclusion. Bilbo has now grown too old, Elrond and the elves can no longer remain in Middle-earth, Gandalf has fought too long and hard and so too has Frodo. In the final chapter they meet at the Grey Havens to set sail for the West—a kind of Avalon—and Frodo in parting with his beloved Sam says,

> I have been too deeply hurt, Sam. I tried to save the Shire, and it has been saved, but not for me. It must often be so, Sam, when things are in danger: some one has to give them up, lose them, so that others may keep them. (III, 382)

And Sam is left alone with his new family to carry on the hobbit life and to feel the sense of loss more than any other. He is now the most important personage in the Shire and "the most famous gardener in history."

All of this, the hobbits and the other characters, the lack of Christian moral, the sense of loss, is drawn together by the central controlling concept of the epic, that of Nature. In a way it is a surprising divinity to be worshiped in the twentieth century, and in a way it is quite relevant. It is in keeping with the natural cycle of life that the elves must leave Middle-earth, and the hobbits and dwarves decline in power. For all things in nature grow and fade in their season. It is natural, too, that man should come to power in the Fourth Age, for his powers are like those of the hobbit, but he is more aggressive; but given time he may acquire the virtues of the hobbits, these three qualities most praised and exemplified in *The Lord of the Rings*, love, pity, and regeneration, and no other terms describe so well a uniquely twentieth-century faith and hope.

PRINCIPLES OF TAXATION AND CHARACTERISTICS OF MAJOR STATE TAXES

By RICHARD D. GUYNN*

The limitations of various theories of taxation often reduce the task of tax legislation to political expediency. The struggles of groups and classes over the distribution of the tax burden indicate little agreement over the concept of "tax justice." Much taxation has been based on compromises presented by interested parties. This method, common to weak governing bodies, rationalizes many tax laws. Thus, a state finds that its revenue system discriminates against segments of society incapable of making known their views.

The progressive tax falls on people most capable of paying. Despite a basic belief in progressive taxation, the tax burden has recently shifted to low income groups. A notable example is the increasing dependence of state and local governments on sales and use taxes which are inordinately regressive for some income groups. In the early years of state taxation over half of the total revenue was derived from general and selective property taxes. However, in recent years the emphasis has shifted to income and consumption taxes.[1] These latter taxes fall heavily on the wage earner while in earlier years most of the tax burden was borne by property owners and businesses.

Expediency appears to be the most commonly used method of legislating taxes in many states. Few comprehensive studies have been made by states to suggest policies for legislators to follow as a guide for legislating taxes. A solution to expediency is a well-planned tax system which takes into consideration social, ethical, and economic factors.

This paper examines the fundamental principles of taxation and the characteristics of major state taxes. This examination can (1) aid in determining the structure of a tax system consistant with society's goals, (2) suggest criteria by which the faults and attributes of major types of taxes can be judged, and (3) provide measures by which proposed tax revisions can be appraised.

In a democratic society one commonly accepted principle of taxation is equality, which implies equal treatment of those people equally circumstanced.[2] An inherent weakness in the application of this princi-

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[1] William J. Shultz and C. Lowell Harriss, *American Public Finance* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965), p. 226.

[2] James M. Buchanan, *The Public Finances* (Homewood, Illinois: Richard D. Irwin, Inc., 1960), p. 166.

ple is the nonexistence of characteristics of equality used to determine an individual's tax burden. Equality is a matter of degree and some discrimination is possible since the socio-income groups are not clearly defined.

State and local taxes in the United States are structured in an inequitable manner because taxes are regressive and discriminate against families with low incomes. A study by the Tax Foundation found that the total state and local tax burden regressed from 14.4 per cent of personal income for families in the under $2,000 income class to 8.4 per cent of personal income for those in the $15,000 and over income class.[3] The types of taxes that proved to be the most regressive were selective sales and excise, general sales, property, social insurance, and employer contributions.

If the idea of equality or inequality is to be meaningful, the principle of equality needs to be an integrated part of a specific tax system. However, there is considerable disagreement as to how equality should be defined. Some theorists propose that consumption should be the guide for the determination of equity while others maintain that income should be the index for equity determination.[4] In spite of this controversy, the doctrine does have positive value. It concentrates our attention on tax-burden discriminations so we can reflect whether there is an equitable basis for them. In most democracies, fiscal equality is interpreted as taxation according to benefits-received or ability-to-pay.

Numerous tax theorists place considerable emphasis on the benefits-received principle for the distribution of the tax burden. This principle rests on the idea that those who receive benefits from governments should absorb the major portion of the costs for these services. Although directly assessing the recipient is not always possible, frequently this principle has been applied to justify such taxes as the gasoline tax. Gasoline, in terms of amounts used, is considered a measure of benefits received from highway construction and maintenance. This theory is valid only when the decision to collect can be tied to the decision to spend. Other public services, such as the satisfaction of social wants, do not lend themselves to marketing, and their value cannot be approximated by an objective measure.

A number of ambiguities surround the benefits-received principle. It implies that total benefits are equated to the total amount of taxes paid. Economists maintain that each taxpayer receives a surplus, because most people receive more in the form of benefits than they would be able to pay for if everyone had the responsibility of providing these services on an individual basis.[5] A second ambiguity is the interpre-

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[3] Tax Foundation, Inc., *Tax Burden and Benefits of Government Expenditures by Income Class*, 1961 and 1965 (New York: Tax Foundation, Inc., 1967), p. 18.

[4] Richard A. Musgrave, *The Theory of Public Finance*, (New York: McGraw-Hill Book Company, Inc., 1959), p. 161.

[5] Buchanan, *The Public Finances*, p. 170.

tation of marginal benefit rather than total benefit as a basis for tax collection. According to this definition, taxpayers receiving public services would pay taxes for value received based upon the cost of providing the service at that time. The benefit received would be valued in the same manner as a commodity sold in a competitive market, thus changing the concept of taxation from one of total benefits received to payment according to the incremental benefit received.[6] Although marginal benefit provides a more equitable measure, it is as difficult to determine as total benefits received. In addition, there is no measure for personal sacrifice involved in the corresponding tax payment. Still, the principle does have value in forcing the student, voter, and public official to compare alternatives and to look at marginal government spending rather than the total or the average.

The ability-to-pay principle implies that individuals with unequal ability be taxed in an unequal manner.[7] The major problem associated with this idea is the determination of the ability to pay for unequal groups. Someone other than the individual being taxed must be given the authority to decide the ability of an individual to forego income to the public sector. Income, consumption, and property ownership have been the traditional guides for establishing a person's ability to pay taxes. For many advocates of this principle, the personal income tax is considered the most equitable tax as it assumes that individuals with greater incomes, wealth, or claims to wealth have greater ability to sacrifice tax payment.[8]

With regard to the ability-to-pay approach, the contribution to public services is treated as an independent problem which differs from the benefits-received idea. The former is seen as compulsory payments and the revenue-expenditure process is viewed as a planning problem not subject to solution by the operation of the market mechanism.

Other theories related to the ability-to-pay principle have been developed to justify progressive forms of taxation. One is the principle of minimum-aggregate-sacrifice theory which is based on the theory of diminishing marginal utility. It is assumed that individual satisfaction (utility) cannot be measured, but is comparable between individuals. This implies that the absolute sacrifice of paying taxes can also be compared.[9] Based on these assumptions it is possible to devise a tax structure where the degree of sacrifice will be uniform for all taxpayers regardless of income level. Although total utility and interpersonal utility cannot be measured cardinally, many people are willing to accept the theory that marginal utility of income does decline for most individuals receiving a substantial increase in income.

When levying a tax, the taxing authority generally desires that it

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[6] *Ibid.*, p. 171.

[7] *Ibid.*, p. 168.

[8] Musgrave, *The Theory of Public Finance*, p. 94.

[9] Buchanan, *The Public Finances*, p. 169.

be productive in securing the desired amount of revenue regardless of economic conditions, which can vary widely within a short period of time. State expenditures must be met during periods of high and low economic activity. The productiveness of any tax depends on factors such as rates, exemptions, deductions, the number of taxpayers, and economic developments.

Closely associated with the principle of productivity is elasticity. Rate variation can make the yield of most nonregulatory taxes elastic. A tax is elastic when an increase in rates results in a higher yield and a reduction in rates results in a lower yield. However, in neither case is the effect on revenue proportional. As any tax rate is raised beyond a point of optimum productivity, elasticity diminishes and results in a reduced tax yield.[10] There is little evidence to indicate the optimum rate of taxation. Therefore, a revenue system must be structured in a manner that will not cause financial hardship as economic conditions change. An elastic tax should be capable of expanding rapidly to produce larger revenues and contracted rapidly to reduce receipts. States which employ the sales and income taxes are fairly well equipped to respond to changes in economic conditions.

A final factor which must be considered is the administration of tax collecting. It is important to minimize the cost of collection. Effective administration is also essential for the maintenance of tax equity. Regardless of how equitable a tax appears in theory, equity is not maintained if large numbers of people are able to avoid the tax.

The effectiveness of administering a tax is enhanced if the base is clearly defined by the collecting agency and understood by the taxpayer. Administration of a tax can be simplified if ambiguities are avoided through proper definitions of the tax base and if exemptions which are closely related and difficult to interpret are avoided. Generally, those taxes having the largest bases and consisting of large number of transactions offer the greatest difficulty in administration. These problems are encountered with the property and income taxes. However, effective methods of dealing with these taxes can be developed by agencies that are flexible enough to adopt procedures designed to eliminate or reduce problem areas.

Effective tax collection requires officials who are experienced, efficient, and qualified to administer taxes. The purpose of minimizing costs is not to minimize the staff, but to extend the staff to the point where any additional costs in administration are equated to the incremental increase received from the added effort.[11]

Consumption taxes are defined as any tax which rests on the consumer. They may be levied directly on the consumer or may be shifted

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[10] Shultz and Harriss, *American Public Finance*, p. 187.

[11] John F. Due, *Government Finance and Economic Analysis*, 3rd ed. (Homewood, Illinois: Richard D. Irwin., 1963), p. 120.

to the consumer in the form of higher prices. They are classified as general or selective sales taxes.

The general sales tax is described as an addition to the price which is paid by a person buying at retail. It is usually a tax levied on the seller for the privilege of doing business in the state, although the intent is for the incidence to be passed on to the buyer. Initially, the fundamental objective of the movement for a general sales tax was to lessen the tax burden of the wealthy. The sales tax has continued to be an easy way of shifting a significant portion of the tax burden to millions of consumers.[12]

An ideal sales tax structure should fall uniformly on consumption expenditures; it should consist of a uniform percentage of the final price to the purchaser. The tax should be neutral in its effects on production and distribution to prevent producers from being penalized in their competition with other manufacturers in different areas.

Several arguments have been offered to justify the extensive use of the sales tax. They are: (1) In recent years, administration of the sales tax has improved, making it one of the easiest to administer and the most economical to collect. (2) The sales tax aids in the distribution of the tax burden, as it forces each individual to bear part of the cost of government. (3) Other types of taxes often discourage business activity because they discourage investment and encourage investors to employ their financial resources in tax-exempt securities. (4) Sales taxes are an efficient means of taxing individuals who are in a position to avoid the income tax. (5) It is a broad-based tax. (6) The sales tax is an excellent tax for use if the income tax has an adverse effect on the economy.

The primary objection to taxes on sales is their regressive nature in terms of income groups. Since low income groups tend to spend a larger percentage of their incomes for consumption, a higher portion of that income may be claimed by taxes than is the case with wealthier families.

The selected excises include taxes on alcoholic beverages and tobacco products and road-user excises. While these taxes have the same general advantages and disadvantages as the general sales tax, they tend to be more popular with the taxpayer because of their general nature. Alcohol and tobacco are considered harmful nonessentials whose use should be curtailed by taxation. Road-user excises, including gasoline taxes and vehicle registration fees, are justified on the basis that those individuals who utilized vehicles and roads should pay for the costs incurred in the construction and maintenance of highways. Rate increases in selected excises encounter less political resistance, making them lucrative sources of revenue for many states.

Many states have long established income tax laws and rely on this tax as a lucrative source of revenue. These states generally follow the

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[12] Alfred G. Buehler, *Public Finance,* 3rd ed. (New York: McGraw-Hill Book Company, Inc., 1948), p. 14.

guideline of the federal government with respect to the concept and definition of incomes. Many of the differences in income tax collections between the two levels of government arise from limitations in the state's authority to tax incomes and the state's lagging behind the federal government in changes in the definitions of terms.

In accordance with the ability-to-pay principle, the individual income tax is considered the fairest tax because it is a tax on produced wealth. It is a broad-based tax with good revenue potential. Income taxes have an advantage over consumption taxes as they have no impact on the costs of production and do not constitute a part of business costs. Consumption patterns can be altered with the income tax conjunction with social objectives. Rates can be made progressive to redistribute income away from the rich in favor of the poor, and, alternatively, rates can also be manipulated to redistribute income in the reverse manner. Low income groups tend to spend larger proportions of their incomes on consumption than do the higher income groups. Studies have indicated that higher incomes lead to a lower propensity to consume. Redistributing income to the lower income groups results in these groups having more to spend and this increases aggregate consumption.

One of the inherent weaknesses of the income tax arises out of the very nature of the tax. Individuals who hold titles to wealth are often people of great influence and are in a position to use their wealth and influence politically to escape their share of the tax load. By bringing pressure on state officials, they are frequently able to force legislators to rely on other types of taxes that are more regressive. Substitute taxes frequently take the form of consumption taxes, thus placing a larger burden on the poor. A second undesirable feature of the income tax is that revenue varies with economic fluctuations. States imposing the tax must be cautious in forecasting changes in the level of economic activity; otherwise, a failure to adjust expenditures to receipts can lead to financial embarrassment. States which have relied on the income tax for a number of years have refined their systems of collection to the extent that most of them have achieved substantial efficiency of administration.

A final point to be considered is that relationships between leisure time and time worked may be altered by the income tax. Economic theory assumes that individuals subconsciously think in terms of marginal utility in making expenditure decisions. Income earned for labor expended constitutes pleasure while the energy expended and all the discomforts of work constitute pain. Workers attempt to equate the marginal pain and pleasure of work. Consequently, if an individual's income from work is overcome by higher taxes, he may demand more leisure time which leads to a reduction of constructive work time. Some economists contradict this idea with the argument that higher taxes serve as an incentive for people to work harder to offset the losses to taxes.

Smaller units of government have traditionally relied on the property tax to a greater extent than any other level of government. How-

ever, the authority of local governments to levy property taxes is often limited by the state constitution or state legislation. The property tax or *ad valorem* tax is usually a tax on tangible personal property. Some states, however, have a tax on intangible personal property. The property tax is a broad-based tax. If properly administered, it can be a lucrative source of revenue. Local governments can rely on the property tax regardless of economic conditions; thus, revenues provided in predictable amounts can give the governments stability and simplify their budgetary process.

One of the major inadequacies of the property tax is the assessment process. There is a need in most areas to revamp the entire procedure of assessing property. In many areas the same assessment method has been used for decades and due to the standardization of customs, administrative procedures, and socio-political structures, local officials are reluctant to modify present forms of assessment. The local assessor is typically an elected official, who is not a full-time employee, is poorly paid, and often poorly trained. Because the office requires public election and is short term, the job is often politically oriented and subject to unnecessary pressure.

A second disadvantage of the property tax is its regressive nature. In the event that two individuals with differing incomes own property of identical value, the land owner with the lower income will pay out a higher percent of his income in property taxes. Also, assessors tend to assess property of low market value near its true value and property of high market value is usually assessed at an amount lower than its true value.[13] Therefore, the individual with low market valued property pays more than his share of the tax burden.

One of the greatest drawbacks of the property tax is the willingness of the state and local governments to grant excessive exemptions. These commonly include all public property (federal, state, and local), property belonging to philanthropic organizations and nonprofit institutions, and new industrial property. Some states also allow a homestead exemption. It has been estimated that one-eighth of all property in the United States is exempt from a property tax.[14] This is a serious erosion of the tax base. Many local governments are forced to borrow money or raise other taxes to compensate for revenue lost by exemptions.

When levying a new tax or revising an existing tax, legislators have the responsibility to keep several factors in mind. The fairness and equity of the tax to the taxpayer, the productiveness of each tax, and the cost and ease of administration must be assigned high priority. Since all taxes currently utilized by state governments have both inherent advantages and disadvantages, tax revision must also be based on num-

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[13] Committee on Public Finance, *Public Finance* (New York: Pitman Publishing Corporation, 1959), p. 425.

[14] *Ibid.*

erous other variables. These include the nature of the present revenue system, the relationship of the revenue system to those of other states in the same geographical region of the nation, and the state's spending needs. The advantages and disadvantages of each type of tax provide important criteria for selecting taxes for modification when considered in relation to the productiveness of a selected tax.

DREAMS, VISIONS, AND MYTHS IN JOHN HERSEY'S *WHITE LOTUS*

By MICHAEL HALTRESHT*

The survival of a persecuted minority may well depend on psychological rather than physical resistance to the will of its oppressors. This is the theme that permeates John Hersey's *The Wall* (1950). Central European Jewry was destroyed partly because its sense of identity and worth had been undermined by centuries of living amidst a hostile environment. Beneath their haughty ethnocentrism and exaggerated ambitiousness, the ghetto dwellers (Hersey suggests) had come unconsciously to despise and hate themselves. Their collective ego weakened, the victims offered little resistance to the Nazis. Indeed, having become anti-Semites themselves, the victims often unconsciously collaborated with their exterminators.

In *White Lotus* (New York: Knopf, 1965), inspired by the civil rights movement in the United States, Hersey returns to the question of ethnic identity and morale. His subject is again an oppressed and endangered group—this time, an imaginary white minority in China. Again survival depends on ego strength, or the ability of the group to maintain its self-esteem and sense of purpose. *White Lotus* differs in emphasis, however, from *The Wall.* In the earlier work, Hersey's intent is to compel us vicariously to experience the sufferings of the social victims in our own flesh and blood. His medium is, appropriately, the diary form. In *White Lotus,* on the other hand, the novelist's appeal is to the intellect. His question is not, What does it feel like to be arbitrarily persecuted? It is, rather: Why do members of persecuted groups react the way they do? Or: Why does a particular individual (or group) give up the struggle and break down, while another persists? These questions Hersey answers in *White Lotus* at the level of the unconscious, and his work represents one of the very few attempts in American fiction to apply psychoanalytic insights to the psychology of minority groups. In this paper I should like to explore the deeper meanings of some of the dreams, visions, myths, fantasies, and superstitions with which the novel abounds.

Consider the dream that White Lotus, a slave, has on the eve of a contemplated rebellion (pp. 284-85). In her dream, the young woman raises her arm to stab her hated mistress. The latter does not offer any physical resistance. Instead, she just looks sternly at her slave—and White Lotus finds herself paralyzed. Her knife falls to the ground, and she is mysteriously compelled, in the dream, to prostrate herself at her mistress's feet and beg "for forgiveness, forgiveness." The ego and counter-ego, the determination to be free and the extraneous notion that it is wrong to defy one's master, are in equilibrium. Over and over the nightmare repeats itself until the slaves self-loathing is so profound that she has to "sit up in bed to stop her nausea and dizziness." The

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slave rebellion, it may be added, is easily crushed by the masters.

This cycle of guilt, self-loathing, and paralysis is illustrated also by the nightmare that another slave named Grin has on the eve of his contemplated escape to freedom (pp. 408-409). At one level, the dream is a preview of the flight. The slave sees himself, in his dream, running out from his "work space" (the plantation) to "the gate" (free territory). A roaring army of hounds soon sets upon him. Grin tries to hide "under a pile of stalks" but the huge dogs close in on him from all sides.

The dream clearly bespeaks the slave's low morale. During the day, the man busily prepares for his break, but at night his unconscious expectation of failure expresses itself. In his dream, the slave indeed hears the pursuing hounds even *before* he starts his run. The nightmare can be read, however, also at a second, deeper level (the so-called subjective, or functional, level). In this perspective, the "I" and the hounds stand not for Grin himself and for his masters but rather for forces inside the man's mind. The "I" symbolizes Grin's desire for freedom and individuality; the hounds represent the value system of his masters. At this level, the dream tells of the absorption of the slave's identity into that of the larger society. Initially the "I" is man-sized, but it becomes progressively "smaller and smaller" until it is tiny enough to hide under a pile of stalks. Simultaneously, the hounds are progressively magnified. They are frightfully large to begin with, and they soon expand into an "army" and a "river" of bristling fur. At the climax of the nightmare, these creatures are about to suck in the "I" by their "gigantic" sniffing: what this means is that Grin's authentic self is about to be overwhelmed by the foreign ego he has taken over from his oppressors. The latter value system makes it wrong for the slave to assert his will against the masters, and this is why Grin does not wholeheartedly carry out the preparations for his flight. The escape to freedom indeed is never carried out because the slave uses his nightmare as a pretext for giving up his scheme. "I can't go," he whines. "I want to go but I..." Grin's friend Dolphin sets out, alone, for free territory, but he is careless and the slave hunters' hounds soon overtake and kill him. Dolphin, too, even while going through the motions of escape, no longer truly desires it. What he wants is simply to die.

On the one hand then, is the natural desire to assert one's individuality; on the other is the internalized will of the dominant majority. The result is a compromise: a guilt-ridden submissiveness that is, in effect, fatal. We find this pattern also in a certain nightmare that plagues White Lotus. In her dream, the girl sees a column, "wide as I was tall," of black ants advancing to engulf her, "as irresistible as the sun's climb" (p.139). She tries to run away, but her feet are rooted to the ground. At the same time, she feels no fear: she has lost her sense of identity—her will has become absorbed into that of the masters (whom the ants symbolize). The ugly, waspish, engulfing hornworms (p. 276), the "hairy spiders and rustling scorpions" (p. 47), the terrible giant "with the horned headpiece" (p. 55), and the fire of which Gull (p. 133) dreams nightly, all

represent the oppressors. So also do the spirits, witches, dragons, and vampires around which the slaves' superstitions evolve.

The same unconscious materials that show the erosion of the slaves' collective ego also reveal its continuing resistance to disintegration and even its drive toward health and growth. In their unconscious minds, for one thing, many of the slaves have preserved a strong sense of purpose. Individually and collectively, they feel that they must accomplish some important mission. The ghetto dwellers in *The Wall* can conceive of nothing worth living for. "The new year will be the end. I feel it," one of them says. The image that Rachel, supposedly a Zionist, has of Palestine is one of folly, barrenness, and futility. Lacking (in Hersey's conception) any whole-hearted commitment to the future, the people of the ghetto give it up without very much struggle. The slaves in *White Lotus*, on the other hand, survive as a group because their dreams and fantasies, their prayers, religious practices and mystic visions, their songs, riddles, and even superstitions (pp. 374, 375), keep their minds focussed on worthwhile goals. They cannot afford to die.

One of the slaves, for instance, expresses his ceaseless longings for freedom by nightly playing his "away songs" (p. 375) about the finch (the slave) sighing in the pine tree, about the difficult path to the mountain (freedom), or about how, "discarding his ankle bands" (his slavery), he "wears shoes with magpie wings (escapes). Or he sings of "the sunset streaks beyond the heights," which he will reach even if he has to walk "ten thousand lis" to get there (p. 416). Another slave sings of "the fields of glory" and "the jasper sea" (p. 224), while a third, named Peace, elaborates a tall tale (p. 125) that does become meaningful as a wish-fulfilling fantasy when we realize that the huge Mexican jaguar must mean the masters' army, that the fleeing pocket gophers stand for individual Chinese troops in flight, and that the white hunters that reduce the jaguar to a "thin, mangy goat" must be rebellious slaves. Indeed all of the bizarre visions of Peace, that rabidly nationalistic priest-slave, make sense in terms of his desire to see the downtrodden prevail over their masters and establish an autonomous, free society of their own. Peace happens to be a madman, but fellow slaves are impelled to join him when he acts out his fantasies of freedom and power. The man's private hallucinations are soon incorporated into the community ritual.

There is more to the slaves' mythology than the longing for brute power, however. What the oppressed people crave at least as intensely is, perhaps surprisingly, a sense of psychological and spiritual liberation. The slaves' ceremonies and folklore contain many symbols of revenge and destruction but imagery of height (birds, kites, the mountain, ladders, the stars, and the like) outnumber all other images, while archetypes of purification, light, and fertility (fire, stars, femininity, spring) are next in frequency. These anagogic strivings may be unconscious. But they are quite real.

Consider, for instance, the seemingly meaningless nursery song about the bride and the groom (pp. 526-27). At the so-called objective

level, the song tells of the marriage, under a lowering sky, of two slaves, and what the jingle emphasizes is the futile cycle of sexuality, birth, life, and death among the downtrodden. The nubile "pomegranate girl" and "the vegetable snake" "enter the bedroom" (sexual union). A "blossom" is deposited "in the stream" (pregnancy), is born, and then "falls in the stream" (death). The slave's existence has no meaning beyond this mechanical cycle. At the subjective or functional level, however, the song carries a deeply affirmative meaning. At this second level, the union of the bride and the groom symbolizes the longed-for reintegration of the male and female aspects of the slaves' collective personality. It is a union of the potentials of the oppressed minority for strength and for artistic and spiritual creativity. The two "gaudy" gifts that the groom receives—the "fine horse" and the fur hat—symbolize, respectively, a new body and a new spirit, as often they do in C.G. Jung's dream theory. The wedding presents associated with the bride (oil and laurel) are strongly "fragrant," and they are offered in a bowl and a jug. These are the blessings of the feminine part of the personality (what Jung called the *anima*). They are the gifts of holiness (the oil), life (the evergreen laurel), and perfection (the mandala imagery). The sexual female symbolism of the bride's "gifts" of fragrant, oil-filled "containers" is certainly there, but we should not ignore the spiritual signification.

Liberation for the slaves (the song says in effect) lies in neither submission nor violent revenge but rather in the fullest development of their spiritual and psychological resources. The same meaning is conveyed by White Lotus's vision on p. 144. The cooperative, ceremonial construction of the house is symbolic of the slaves' desire to have their own home—to have autonomy and independent institutions. The branch that Gabe attaches to the new, living house is a symbol, like the Biblical olive branch, of hope, and its "leafiness" suggests also ideas of spiritual fertility. This archetypal meaning of the vision explains the cheering of the crowd and the song, "*We are watching, we are waiting, For the bright prophetic day.*"

In Hersey's view, then, a threatened group is challenged, first, to preserve its identity from being overwhelmed by the ego of the larger society. Secondly, it must develop positive goals and deeply commit itself to the realization of these objectives. When this dual challenge has been met, the minority group is no longer on the defensive. It is, indeed, to make its own contributions to the larger society. Here again a contrast suggests itself between *The Wall* and *White Lotus*. In the former novel, the characters are progressively driven backwards on themselves. The Germans begin by surrounding the ghetto with a wall, then add a new wall within the old one, then further decrease the ghetto area by a series of barbed-wire fences. Eventually, they drive the inhabitants of the ghetto into cellars and sewers. The victims, in Hersey's novel, accept their confinement and isolation, and even feel most secure within the ghetto. *White Lotus*, too, contains many actual and symbolical walls, but the oppressed people here have the strength never

quite to accept their imprisonment. They persist in their efforts to break the walls down and, inevitably, they are victorious. At the end of the novel, a sit-in by former slaves is successful, and the title character has a moment of mystic illumination (p. 670). The white lotuses and "the perfect crystalline pool" she envisions symbolize her newly liberated self. It is a prize that she has very richly earned.

THE FOREIGN POLICY STATESMANSHIP OF SENATOR WALTER F. GEORGE: 1955-1956

By VAL G. MIXON*

In 1922 forty-four year old Walter Franklin George became a member of the United States Senate to fill the unexpired term of Senator Tom Watson. The junior Senator from Georgia joined a national government headed by the Harding Administration and a Senate dominated by the giant figures of William Borah, Henry Cabot Lodge, Robert Norris, and Robert LaFollette. Thus began a career which was to span thirty-four years, a period in which America would experience great economic and social upheavals, conventional wars of limited scope and the threat of a nuclear war with total annihilation—events which would force the country from its contented isolationalism into an unwanted and unsure leadership of the western world.

George entered the Senate as a representative of the mood of the people of Georgia of the 1920's: he opposed America's entry into the League of Nations, all foreign aid, and was an unvarying conservative on domestic economic matters.[1] The revolutionary events of the 1930's and 1940's altered most of these views. And when George left the Senate in 1956 he was recognized as one of that body's most influential members. Even *The Nation* praised him as "the indispensable man" in Washington on international affairs.[2]

Senator George rose to this pinnacle of influence almost as if by osmosis. Gradually, he became recognized and accepted by his colleagues as a member of that inner group who exemplify the qualities expected of Senators.

This approval by his colleagues accounts for a degree of his power but, of course, even more significant than this intangible source are the positions he controlled in the Senate. At different periods in his career, George served on twelve committees and headed five of them.[3] Two of the most powerful chairmanships he held were in the Finance and Foreign Relations committees. Most of his career he concentrated on financial legislation. But in January of 1955, as the Democrats regained control of Congress, George moved, at the urgent request of the President and Secretary of State Dulles, from head of Finance to Chairman of the Foreign Relations Committee.[4]

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[1] *Atlanta Constitution,* May 10, 1956, p. 1; *Time,* April 25, 1955, p. 23.

[2] "Washington's Indispensable Man," *The Nation,* August 6, 1955, p. 105.

[3] *Time,* April 25, 1955, p. 23.

[4] Editorial, *Atlanta Constitution*, May 11, 1956, p. 4.

The Eisenhower administration was in almost desperate need of congressional support for its foreign policy in the beginning of 1955. The Republican Party had controlled the eighty-third Congress of 1953-54, but the Knowland, Bricker, Bridges and McCarthy wing of the party had not cooperated with Dulles.[5] Rather they had effectively tied administration policy to inflexible and unimaginative slogans such as, "No surrender," "Negotiations equal appeasement," "Unleash Chiang Kai-Shek and free the mainland." Responsible leadership in the Senate was needed to free the executive to explore various avenues in search of solutions to developing problem areas.

George's first major test came only two weeks after he moved up to head the Foreign Relations Committee. American policy in the Far East, which was rigidly tied to Chiang Kai-Shek, and his hopes of eventual "return to the mainland," clashed with what appeared to be Chinese Communist movements to carry out their long promised "War of liberation" against Formosa. On January 18, 1955, after several days of intensive artillery attacks against the off-shore islands in the Tachen Island group, Communist forces landed on Yikiang and easily destroyed the small group of Nationalist defenders.[6]

Secretary of State Dulles immediately pointed out that Yikiang was "without any particular importance" to the military security of the United States or any of its allies.[7] This mild public reaction by the administration did not at all indicate the seriousness with which the stepped up Communist military activity in the Formosa Strait was viewed. The private expressions of concern and the hurried conferences at the highest governmental level which marked the next few days were more indicative of the government's reaction. Eisenhower and his advisors faced the central questions of how far the Communists intended to carry their campaign; that is, would they be content with grabbing a few of the tiny off-shore islands or did they plan to overrun Formosa itself, and what action by the United States would be necessary to stabilize the area.[8]

The dominant opinion within the government held that the Com-

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[5] President Eisenhower referred to these senators when he wrote of the 1954 Congress, "the present situation is, I think, without recent precedent in that the particular legislators who are most often opposing administration views are of the majority party." See Dwight D. Eisehhower, *The White House Years: Mandate for Change, 1953-1956* (New York, 1963), p. 193.

[6] Douglas B. Cornell, "Ike Asks U.N. to Seek Cease-Fire, Discounts Tachens' Importance," *Atlanta Constitution,* January 20, 1955, p. 1.

[7] *New York Times,* January 19, 1955, p. 1.

[8] Louis L. Gerson, *John Foster Dulles* (Vol. XVII, in Samuel F. Bemis, ed., *The American Secretaries of State,* 18 Vols., New York, 1958-1970), pp. 198-206. Eisenhower wrote of these days, "Lately there has been a very definite feeling among the members of the Cabinet, often openly expressed, that within a month we will actually be fighting in the Formosa Straits." See Eisenhower, *The White House Years,* p. 478.

munists would not be thwarted from their often-stated goal of "liberating" Formosa unless the government acted quickly and unequivocally to demonstrate that America stood firmly behind Chiang's Formosa and would defend it with whatever military force was required.[9] The President, as commander-in-chief, could have simply announced that United States military forces would be deployed against any aggressor of Formosa. For reasons both political and strategic, Dulles chose to present the problem to Congress and to request a joint resolution authorizing Eisenhower to use the armed forces to protect Formosa and the Pescadores.[10]

After the initial decision toward a definite course of action was made, events moved rapidly. On the second day following the Yikiang attack, January 20, Dulles held a private meeting with George and other congressional leaders to explain the administration's plans.[11] When the Secretary brought up the congressional resolution proposal, some Democratic leaders expressed the view that the President already possessed the power to command the military forces to defend areas considered vital to the United States. Dulles did not push for commitments on the proposed but said that the Communists must be convinced of American solidarity on the issue.[12]

George made no public comment on the position he would take on the administration request. On Saturday, January 22, Dulles' Assistant Secretary for congressional relations, Thruston Morton, and Francis Q. Wilcox, Chief Clerk of the Senate Foreign Relations Committee, visited George at his apartment to go over a copy of the resolution. The following day George met with Dulles for breakfast and then called a meeting of his Democratic colleagues on the Foreign Relations Committee. In the meeting some of the Democrats voiced a generally felt skepticism of the Republican administration's motives in asking a Democratic controlled Congress for powers which many believed the President already had as commander-in-chief. George attempted to placate these doubts by voicing his confidence in Dulles' objectives; and although a few of the members were convinced that Dulles simply wanted to shift to Congress some of the responsibility which they felt belonged to the President alone, the majority of the group reached the conclusion that they would have to go along with Eisenhower's public request for support.[13]

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[9] Eisenhower, *The White House Years,* pp. 463-68.

[10] *Ibid.* p. 468.

[11] U.S., *Congressional Record,* 84th Cong., 1st Sess., 1955, 101, Part 2, p. 2408; William S. White, "President Plans Formosa Defense if Reds Advance," *New York Times,* January 21, 1955, pp. 1, 3.

[12] *Atlanta Constitution,* April 7, 1955, p. 4.

[13] *The Nation,* August 6, 1955, p. 106; Elie Abel, "President to Set U.S. Defense Area in Formosa Policy," *New York Times,* January 23, 1955, pp. 1, 3.

On January 24, what came to be known as the Formosa Resolution was introduced simultaneously in both houses of Congress.[14] George introduced the measure in the Senate and thus announced his intention to act as guide and protector of the resolution. Committee consideration of the resolution was immediately arranged as a joint session of the Senate Armed Services and Foreign Relations Committees, with George presiding, was called to hear Dulles and the Joint Chiefs of Staff explain the rapidly deteriorating Far Eastern situation. George limited the committee hearings to administration spokesmen and adamantly refused to consider amendments or substitutes to the measure.[15]

When the joint committee sent the resolution to the Senate floor by a vote of seventeen to two, opposition, which had previously been expressed only privately, broke into the open. Testimony by the military experts had left doubts in the minds of some Senators as to where the ultimate decision to "pull the trigger" would be made. Senator Wayne Morse of Oregon launched a vehement attack against the resolution and accused Dulles of developing a "preventative war" policy in Asia.[16] Senator Mike Mansfield of Montana, in a more measured tone, brought out reservations held by many leading Democrats about the lack of clarity of the resolution on the scope of power being granted. Too, Mansfield again pointed out that many Senators felt that Eisenhower was trying to shift responsibility onto Congress for a decision which as commander-in-chief he alone should make.[17]

As the rumblings of potential opposition grew louder, George advised Dulles that the principal misgivings in the Senate appeared to center on concern over the possibility of the United States being dragged into a Chinese war by actions initiated by Chiang's forces.[18] He

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[14] U.S., *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 1, pp. 605, 625. The resolution authorized the President "to employ the armed forces of the United States as he deems necessary for the specific purpose of securing and protecting Formosa and the Pescadores against armed attack, this authority to include the securing and protecting of such related positions and territories of that area now in friendly hands and the taking of such other measures as he judges to be required or appropriate in assuring the defense of Formosa and the Pescadores." See Eisenhower, *The White House Years*, p. 608.

[15] Douglas Cater, "Foreign Policy; Default of the Democrats," *The Reporter*, March 10, 1955, p. 22. President Eisenhower later praised George's efforts against "crippling" amendments to the Formosa resolution. Eisenhower, *The White House Years*, p. 469.

[16] U.S., *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 1, p. 736; William S. White, "Two Senate Committees Back Formosa Policy; Bitter Floor Debate Begun," *New York Times*, January 27, 1955, pp. 1, 2.

[17] U.S. *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 1, p. 621; William S. White, "Quick Approval Seen of The Request for Power to Use Force on Formosa and Pescadores Islands," *Atlanta Constitution*, January 25, 1955, p. 1.

[18] *Atlanta Constitution*, January 27, 1955, p. 1.

recommended that the President issue a statement definitely clarifying where the ultimate decision as to the use of military force would be made. Eisenhower responded on January 27, when he assured the country that he alone would decide when and where to order American forces into action.[19]

Immediately after the President's statement was made public, George took the Senate floor to deliver what David Lawrence of the New York *Herald Tribune* called an address of statesmanship seldom equaled in the history of the United States.[20] George quickly dispensed with the "who will pull the trigger" argument by pointing to the assurances given by Eisenhower. Then he turned on those who would either kill or amend the resolution with the demand that "every member answer on his conscience the question of what is his alternative."[21] The debate about constitutional powers, said George, was nothing but "legislative quibbling," and "certainly he [the President] has both asked for authority from Congress and has invoked the powers of the executive branch of the government and in these two departments all these powers must reside."[22] After warning against the adverse effect amendments to the administration measure would have on nations abroad, George boldly and unequivocally removed the issue from partisan politics. "I hope no Democrat," he said, "will be heard to say that because the President of the United States came to Congress he is thereby subject to criticism."[23]

Several attempts were made to amend the measure but were defeated by one-sided votes, and on the final vote only Senators Estes Kefauver, Herbert Lehman, and William Langer elected to go on record opposing the Presidential request.[24] Commentators unanimously agreed that the administration had George to thank for holding an almost unanimous Senate in support of its Far Eastern Policy.[25]

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[19] W.H. Lawrence, "President Says He Alone Will Make Decision on Formosa Strait Action," *New York Times*, January 28, 1955, pp. 1, 2.

[20] U.S., *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 1, p. 922.

[21] *Ibid.*, p. 819.

[22] *Ibid.*, p. 820.

[23] *Ibid.*, p. 821. *The Nation* commented, "George crushed, with the power of his oratory, the threatened Democratic revolt against the President's Formosa resolution." *The Nation*, August 6, 1955, p. 106.

[24] U.S. *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 1, pp. 921-Senator George conceded in his major speech on the resolution that what the Senate was about to authorize the President to do might lead to "an evil to our country and a horrible experience." "But," he continued, "it is one of those things as to which, when we assume high public office, we simply assume the responsibility of passing upon." U.S., *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 1, p. 821.

[25] Arthur Krock, "The 'Old Man' Lays It on the Line," *New York Times*, January 28, 1955, p. 18.

To further clarify and legalize United States' relation with Chiang Kai-Shek, the Senate ratified, shortly after passing the Formosa Resolution, a mutual defense treaty with Nationalist China.[26] The administration had negotiated and signed the treaty during the last months of 1954, and had taken the precaution to inform George of the details of the pact shortly after both Eisenhower and Chiang had agreed to them. Assistant Secretary of State Walter S. Robertson was dispatched by Dulles to George's home in Vienna, Georgia, to go over the agreement with the Senator and if possible to win his support.[27]

George apparently accepted the substance of the pact and agreed to guide it through the Senate. George's party was not all united behind him in support of the treaty. One source of opposition was the Democratic National Committee, which had circulated a memorandum questioning the wisdom of signing a mutual defense treaty with Nationalist China and stating,"It would therefore seem to be in the interest of the United States to separate Formosa and China.[28] Congressional Democrats refused to go along with this reasoning. Too, they were jealous of their prerogatives and felt that they and not the national committee should define Democratic policy on foreign affairs.

Democratic Senators had other specific objections to the pact, but George was successful in keeping their criticisms out of the ratification resolution. Instead, the Senators simply accepted Dulles' assurances on the matters which concerned them: (1) the treaty did not grant Chiang title to the island of Formosa; (2) no offshore islands could be added to the treaty without Senate consent; (3) Chiang would agree not to attack the mainland without first obtaining United States consent. After these assurances were made by the Secretary, only five Democrats and one Republican voted against ratification.[29]

Neither the Formosa Resolution nor the Mutual Defense Treaty served definitely to stabilize the military situation in the Far East. But in April, 1955, Chou En-Lai announced that he was willing to discuss

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[26] U.S., *Congressional Record,* 84th Cong., 1st Sess., 1955, 101, Part 1, p. 1416. The United States and Nationalist China agreed that an attack on either would endanger the safety of the other. But the United States committed itself in the treaty to defend only Taiwan and the Pescadores. Gerson, *John Foster Dulles.* p.203.

[27] Cater, "Foreign Policy," p. 23; Gerson, *John Foster Dulles,* p. 202.

[28] James Reston, "Democrats Unhappy Over Far East Role," *Atlanta Constitution,* April 7, 1955, p. 4. Adlai E. Stevenson, the titular head of the Democratic party who was not even consulted about Formosa policy by Congressional Democrats, did not respond to the administration's Far East policy for several weeks. In a speech carried by national radio and television on April 12, Stevenson opposed the use of force in the Formosa Strait, especially to defend Quemoy and Matsu. *New York Times,* April 12, 1955, pp. 1, 4.

[29] U.S., *Congressional Record,* 84th Cong., 1st Sess., 1955, 101, Part 1, pp. 1380-81, 1416; William S. White "Senate Approves Formosa Treaty," *New York Times,* February 10, 1955, pp. 1, 14.

the Formosan problem with the United States.[30] The first statement from the administration concerning the proposal was drafted by Undersecretary of State Herbert Hoover, Jr. in Dulles' absence and cleared by Eisenhower.[31] This statement simply reiterated the United States' demand that free China participate as an equal in any discussion concerning the area. This position would have ended further maneuvering toward discussions, because the Nationalists and Chinese Communist governments did not recognize the legitimacy of the other.

George, however, spoke up to urge the administration to accept the Chinese offer to discuss the Formosan problem, with or without the participation of Nationalist China.[32] In anticipation of those who would cry appeasement, George said, "For one strong power to say it is willing to sit down and talk is not appeasement," and he hoped the United States would be "big enough and great enough to accept Chou's offer."[33] The next move was up to Dulles, and he made it in a follow-up announcement which held that Chiang would not necessarily have to be present in talks limited to a cease fire in the Formosa Strait. He explained the discrepancy in the two State Department positions by saying that he had been out of town and had not seen the Hoover statement before its release.[34]

The Knowland-Bridges wing of the Republican Party reacted bitterly against Dulles' change of position. Senator Knowland implied in a strongly worded criticism of the administration's stand that he might withdraw as party leader in the Senate if negotiations were actually held with the Chinese Communists without participation of Chiang.[35] Despite the fact that most of the top Senate Republican leaders were opposed to negotiations, Dulles maintained his position.

In the spring of 1955, George pushed for negotiations not only between the United States and Chou En-lai but also was the first leading public figure in the United States to advocate an East-West summit meeting.[36] On the "Meet The Press" program of March 20, 1955, George expressed his opinion that "the real hope of avoiding war is through high

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[30] Tillman Durdin, "Chou Asks for U.S. Talks on Easing Formosa Crisis," *New York Times,* April 24, 1955, p. 1.

[31] U.S., *Congressional Record,* 84th Cong., 1st Sess., 1955, 101, Part 5, p. 6094; *New York Times,* April 24, 1955, p. 1E.

[32] Charles E. Egen, "U.S. Stresses Chiang Role; George Would Accept Bid," *New York Times,* April 24, 1955, pp. 1, 3.

[33] *Ibid.*

[34] James Reston, "Dulles Is Willing to Talk to Peiping on Cease-Fire without Nationalists," *New York Times,* April 27, 1955, p. 1.

[35] "Knowland Strongly Attacks Administration China Policy," *New York Times,* April 28, 1955, p. 1.

[36] Dana Adams Schmidt, "George Proposes Big Four Parley to Prevent War," *New York Times,* March 21, 1955, pp. 1, 10. Also see Eisenhower, *The White House Years,* p. 505.

level conferences among the leading powers."[37] In urging a summit meeting without insisting that the Russians first meet certain conditions, George broke with the position held by the Eisenhower administration.[38]

According to James Reston of the *New York Times*, George believed that the international situation was such that a meeting of the great powers was essential to relieve the growing war fears produced by the tense Far Eastern situation. George interpreted available information on Sino-Soviet relations as indicating the Russian's increasing dissatisfaction with the aggressive policies being followed by the Chinese in the Formosa strait. He, according to Reston, felt that the Soviets could be persuaded to exercise a restraining influence on the Chinese. Also, the Senator felt that such a meeting would provide Eisenhower with an opportunity to assure the Russians that they had nothing to fear from a rearmed Germany allied to the North Atlantic Treaty Organization.[39]

The immediate effect of George's public statement was to point up certain internal difficulties the Republican administration was having over the question of negotiations. Senator Knowland was opposed to all high level negotiations, and after a meeting with the President announced that the George proposal did not reflect the viewpoint of the government. Eisenhower indicated in a message to George that he was in general agreement with the Senator's views, but in a subsequent press conference the President again reiterated his determination that the Russians give "some evidence" of intentions to bargain in good faith, rather than for propaganda purposes, before he would agree to a summit meeting.[40]

During the following months discussions over the need for a peace conference continued, and public opinion gradually forced governments on both sides of the Iron Curtain to agree to a late summer conference. Thus the prospects of fruitful negotiations checked the war talk over Formosa and turned the attention of world leaders toward ways to maintain peace. George was given much of the credit by news commentators and members of Congress for helping to create the kind of political climate which enabled the administration to enter into negotiations with the Communists without fear of partisan political attack.[41]

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[37] Schmidt, "George Proposes Big Four Parley," p. 1.

[38] Eisenhower, *The White House Years*, p. 504.

[39] James Reston, "State Department Favoring George Plan for Big 4 Talk," *New York Times*, March 22, 1955, pp. 1, 10.

[40] Elie Abel, "G.O.P. is Divided on Big Four Parley; Knowland Wary," *New York Times*, March 23, 1955, pp. 1, 4.

[41] U.S., *Congressional Record*, 84th Cong., 1st Sess., 1955, 101, Part 10, pp. 12572-76. Eisenhower referred to George's role, "To my delight I received a call from the statesman who had put so much of himself behind the idea of this Summit meeting, Senator Walter George of Georgia." Eisenhower, *The White House Years*, p. 510.

George also helped the administration defend its foreign aid policy during the two years he headed the Foreign Relations Committee. Once in a debate over foreign aid programs George conceded that much of the public seemed disenchanted with the policy but went on to add his conviction that "To slacken assistance to allies would be to invite disaster." [42] George saw the program as a bulwark and necessary part of the United States' position as world leader, and he felt that the result of ending the program would be to leave America as an isolated "garrison state."[43]

George pointed out in his arguments for continued economic and military aid to America's allies that the United States had three courses which she could follow in meeting the challenge of world problems. Isolationism and domination, said George, had been ruled out by the American people, and that the course which had been chosen of building "an alliance of equal partners jointly dedicated to the task of keeping the free world free" required a substantial foreign aid program.[44]

George's efforts on behalf of the administration's aid programs were not confined to defending the total amount of funds requested but involved challenges from leading Senate Republicans to executive control of the programs. In 1955 the chief struggle over the program was brought about by Senator Knowland and other Republicans when they attempted to amend the bill to provide that a large proportion of the economic aid funds be dispensed as loans. George told the Senate, "We might as well abandon the whole [economic aid] program" if such restrictions are placed on administering the aid because the countries in most need of assistance would be unable to repay loans.[45] In the debate George assured the Senate that the loan method would be used whenever feasible for "it shakes the dignity of the Asian people [who receive most of available aid funds] to regard themselves as the recipients of alms."[46] The amendment was defeated when twenty-nine Democrats and twenty-two Republicans voted with George while twenty-two Republicans and eleven Democrats supported Knowland.[47]

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[42] U.S., *Congressional Record*, 84th Cong., 1st Sess., 101, Part 9, p. 11090.

[43] Senator George, who had consistently opposed foreign aid programs, announced in a speech before the annual dinner of the American Society of Newspaper Editors on April 24, 1955, that he had changed his mind about the desirability of continuing economic aid. After stating, "I change my mind as I go along, frequently . . . " he explained that he now saw "Point Four" type of assistance as "of greater value and promises more than military aid to people who love peace and who don't want war." See "Text of George's address to Editors on Foreign Policy of the U.S.," *New York Times*, April 25, 1955, p. 9.

[44] U.S., *Congressional Record*, 84th Cong., 1st Sess., 101, Part 9, p. 11090.

[45] *Ibid.*, Part 6, p. 7468.

[46] *Ibid.*, p. 7264.

[47] *Ibid.*, p. 7479. Also see John D. Morris, "Senate Approves 3.5 Billion in Aid President Asked," *New York Times*, June 3, 1955, p. 1.

The 1956 aid program also met determined opposition from leading Republican Senators who introduced amendments aimed at eliminating aid to Yugosalvia and substantially reducing funds marked for India. In spite of appeals from Eisenhower and Secretary of State Dulles, Senators Knowland and Styles Bridges made an all-out effort to circumscribe the administration program with legislative directives. The right-wing Republican attacks on aid to Yugoslavia were inspired by certain indications, such as Marshall Tito's visit to Moscow, that Soviet-Yugoslav relations were rapidly improving. The Knowland-Bridges group maintained that in helping Tito the United States was simply strengthening the Communist world.[48] In a letter to George, Dulles countered this argument by pointing out the need for a flexible policy toward Tito in the hope of thwarting Soviet efforts to retrieve its mistakes in Yugoslavia. The President also wrote George urging the Congress to leave the executive with a free hand in his relations with Tito.[49]

George responded to the administration's appeal in a speech before the Senate in which he warned his colleagues of the probable results of ending aid to Tito. Yugoslavia, said George, would have no other recourse than to make a complete turn into the Kremlin fold. George went on to point out the implications of such a policy. "It would be said everywhere, that unless the United States can be a great imperialistic nation and decide with whom any nation to which she offers assistance shall associate on friendly terms, the United States will have nothing to do with such a nation."[50] Congress would be proving the charge often made by critics of the United States that foreign aid was primarily an instrument of control.

George's support of the administration was successful in defeating all of the attempts to limit executive discretion over aid funds, except for one Knowland amendment which directed the President to end all new military aid programs for Tito and supply him with only spare parts and replacements.[51] Economic aid for Yugoslavia was not affected, and even the victory over the military program was a relatively insignificant one for the anti-administration Republicans.

One of George's last major addresses to the Senate was an eloquent appeal for the preservation of a strong foreign aid program. The American people, prophesied George, would have the courage to accept the burdens of world leadership, "I know that the American people are

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[48] William S. White, "Senate Opens Aid Debate, George Pleads Against Cut," *New York Times,* June 28, 1956, pp. 1, 11.

[49] U.S., *Congressional Record*, 84th Cong., 2nd Session, 102, Part 10, pp. 14175, 14185.

[50] *Ibid.*, p. 14185.

[51] *Ibid.*, p. 14189.

not going to step backward (toward isolation). And I know that if the free people of this globe lose confidence in us, we shall disappoint the best of hopes of mankind, and we shall utterly fail to justify the sacrifices of our heroic dead, who have died in nearly all lands and have been swallowed up by the blue waters of nearly all oceans."[52]

On May 9, 1956, when Senator George stood in the Senate to announce that for "good and sufficient reasons" he had decided not to seek reelection to the seat he had held for thirty-four years, practically all of his colleagues stood to voice their recognition of his merits. The son of a Georgia tenant farmer had reached the heights of national and even international fame and power only to find that political realities in his home state dictated a reluctant withdrawal from public office. When the prospect of a George-Talmadge struggle loomed for the 1956 Democratic primary, many of the Senator's former supporters notified him of their desire to be free to support the young and extremely popular former governor.[53]

In his statement of retirement George expressed what may have been his chief hope for holding the support of Georgia voters while concentrating on international problems. He said, "I had hoped the united front presented by congressmen would find unanimous approval and undivided support by all responsible citizens."[54] He hoped a bipartisan approach to foreign policy, which he had made possible, would win for him the loyalty of his constituents.

The position that George found himself in was not at all a new phenomenon in American politics. The reasons George gave for his decision not to run again were health and the "political action of my friends," but doubtless the principal determinant in his action was his acknowledgement of the extent of Herman Talmadge's political power. George accepted Congressional leadership over foreign policies which were of vital concern to the nation and in so doing gained a national standing which was in no way indicative of his political support at home. In fact, Talmadge used George's liberal stand on foreign aid and his preoccupation with complex international issues to undermine the Senator's political base in Georgia.[55]

Senator George's brief tenure as head of the Foreign Relations Committee is important for several reasons. His leadership in the moves toward negotiations with the U.S.S.R. doubtless had much to do with

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[52] *Ibid.*, p. 11091. The youngest of George's two sons was lost over the Atlantic in World War II. After the war, the Senator became more and more interested in foreign affairs.

[53] *Atlanta Constitution*, May 10, 1956, p. 1.

[54] *Ibid.*, May 12, 1956, p. 3.

[55] Long-time Georgia political leader Roy V. Harris commented, "If he [Senator George]had just made one speech giving the Supreme Court hell, nobody could have beat him." *Time*, May 21, 1956, p. 23.

creating a favorable public and political environment which enabled Eisenhower to go boldly to Geneva. He helped to negate the opposition of the right-wing in both political parties.

The Senator's actions while chairman also had consequences for subsequent exective-congressional relations. The Formosa Resolution of 1955, guided through the Senate by George with only cursory hearings and limited debate, was the forerunner of other congressional resolutions delegating war powers to the President. The 1955 Resolution was followed, within ten years, by the Middle East Resolution and the crucial Tonkin Bay Resolution. In both of the latter cases the legislative branch followed the precedent set by the George-led Congress in granting the President the option of making war dependent upon future circumstances.[56]

Obviously, as have many Senators, George looked to the executive branch of government to formulate and initiate policies in the international sphere. The role of Congress was chiefly to support and assist the foreign policy of the President. And judging from George's acceptance and public support of administration bills, it appears Dulles was given a practically free hand by George to conduct relations with other nations. When the Senator from Georgia undertook the defense of administration policy, other leading Democrats found it impossible to oppose or publicly to criticize Dulles' policies.[57] The important point is that although some Democrats complained in private, the great majority followed George and allowed the administration a freedom in foreign affairs it most certainly would not have had but for George.

In recent years leading members of the Senate Foreign Relations Committee have been sharply critical of this veiw of the Senate's legitimate role in foreign policy. In fact, members of the Committee, led by Senator William Fulbright, assign much of the responsibility for the United States' international difficulties, especially in the Far East, to the fact that the George view of the Senate's constitutional obligation of "advice and consent" dominated executive-congressional relations in the immediate pre-Vietnam years. These senators contend that

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[56] The Formosa Resolution marks the first time in United States history that precedent was established for executive war-making. All three of the resolutions are clearly uncontrolled delegation of the war power. Both the language of the resolutions and the congressional debates indicate that Congress intended to transfer the power of decision to the President.

[57] James Reston wrote of Adlai Stevenson's dilemma, "He [Stevenson] cannot aim his criticism at President Eisenhower, for Senator George has been standing right in front of the White House door." *New York Times*, April 13, 1955, p. 1. William S. White wrote of George's influence, "No Senator whatever in recent history has been so near to being the final voice on world affaris for a whole party. Mr. George, by his great eminence as the senior member of the Senate, its President *pro tem*, Chairman of Foreign Relations, and senior member of Finance, literally and personally makes Democratic foreign policy." *New York Times*, April 10, 1955, p. 1.

if the Foreign Relations Committee had critically, and publicly, examined executive foreign policy during those years the United States might have avoided the Vietnam disaster.

Senator George, however, by following Arthur Vanderberg's dictum, "Politics stops at the water's edge," got the Republican administration to consult the Foreign Relations Committee on every major foreign policy question. The amount of constructive give-and-take that occurred between George's committee and state department officials was not great on every issue, especially during consideration of the Formosa Resolution, but George's cooperative attitude clearly enabled him to influence Eisenhower's position on talks with Communist China and the Russians.

For good or ill for the future of the Republic this kind of exchange between the executive and the Foreign Relations Committee has ended. The committee is now little more than a discussion circle where senators meet to pass ineffective resolutions while the real business of the world is transacted by the White House. The bickering between the committee and two successive Presidents over Vietnam has resulted in the committee losing its role in establishing and maintaining United States foreign policy. Treaties are increasingly designated "executive agreements" and signed by the President without congressional approval. The committee's advice now is seldom sought and rarely accepted. Its consent is asked only when it is convenient.

The argument could thus be made that George's concern for a unified American foreign policy resulted in Congress having a greater voice in international affairs than if he had taken a more partisan, or more obstructive position. Nevertheless, it seems clear that Senator George sincerely felt that the bipartisan course he set was one most likely to keep this nation out of war, and that his major concern was not personal power or political support but was the welfare of the United States.

ABSTRACTS of MASTER'S THESES

and

SPECIALIST IN EDUCATION PROJECTS

Cutting, Gerald Roger (MA, Psychology, March, 1972)*

SENSITIVITY TRAINING AND HYPNOSIS: EXPLORATIONS IN SELF-ACTUALIZATION

Self-actualization is a process of psychological and biological development that was originally formulated to express what the Taoist of the East have always known to be enlightenment. Researchers in the areas of sensitivity training and hypnosis have recently begun to explore different avenues for bringing about increased potential towards self-actualization. The following hypotheses were formulated and investigated. One, sensitivity training will increase students' potential towards self-actualization as measured on the Personal Orientation Inventory (POI). Two, sensitivity training will increase students' hypnotic susceptibility as measured on the Harvard Group Scale of Hypnotic Susceptibility (HGSHS). Three, students who are highly susceptible will be able, through hypnotic suggestion, to increase their self-actualization potential.

Using students in psychology classes, two experimental and three control groups were formed. Experimental Group I underwent sensitivity training and Experimental Group II, volunteers, were given post-hypnotic suggestions based on the values and attitudes of self-actualizing persons. Control Groups I, II, and III were all taken from classes that used a cognitive approach of instruction. After a four week period, using pretest and posttest administrations of the POI and HGSHS, it was found that none of the hypotheses were supported. However, it was found that Group CI reported significant positive changes on two scales of the POI and CII also increased significantly on three of the scales, ($p<.05$ using a two tailed test). Group CIII, a statistics class, reported a significant increase in susceptibility as measured on the HGSHS, ($P<.05$ two tailed test).

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*MA indicates the degree, "Psychology" is the awarding department and March, 1972 is the time of completion of all requirements. This pattern is followed throughout.

It was therefore concluded that the more goal-directed the setting the more likely are *Ss* to report an increase in susceptibility. This possibility brings Tart's findings (1970) into question. He was able to report significant increases after nine months of fellowship training at Eslen after hypothesizing that personal growth groups would increase susceptibility. The study undertaken here at West Georgia College indicates that in any group which encouraged self-expression, susceptibility tended to decrease. A critique of previous findings using the POI suggests that often personal growth groups are goal-directed phenomena where the experimenter or group leader rewards and discourages behavior and values which he does not feel are appropriate. These growth groups would seem to promote values and goal orientations that are incompatible with the original formulation of self-actualization. Directions for further research are discussed.

Waller, John Lebus (MA, Psychology, March, 1972)

THE LAUGHTER IN THE DARK: A PHILOSOPHICAL INQUIRY INTO THE FRAMEWORK OF THE HUMAN DILEMMA

Being human is a constant state of change in accordance with fundamental, ontological characteristics involving all things and in particular nature and civilization. The incessant ordering and structuring of concepts within the human framework has all but eliminated the conditions for being human and its fulfillment. Underlying the structuring and standardization of "should" and "ought to" goals, the human existence has basic wants and needs which are being by-passed in order to coordinate, regulate and stabilize the interests of an existing environment. When first entering an institution of learning a person is a flowering, fluent mass of energy. But by the time that person gets to the graduate level, he has become a drop of oil to lubricate the machinery of society.

This thesis has tried to point to some of the outstanding factors and consequences arising from being human. It is very difficult to summarize or in some way isolate the process of this work. But one point that emerges rather clearly from this eight chaptered, chaotic background is fairly evident. And that point reveals that chaos, like science, is a way of being human. One is not any better or worse than the other. But it would seem that society would have us believe that a real difference does exist. It's like borrowing money to pay off a loan. To choose is self-defeating.

I am not advocating chaos nor am I advocating science. But, I am ready to deal with science and/or chaos, not as good or bad, right or wrong, but as choosing neither and yet accepting both. I could not choose science as opposed to chaos or visa versa. To live life's many forms in choiceless awareness, responding to each and yet all of its forms, is a way of living.

Heaton, Dennis (MA, Psychology, June, 1972)

PSYCHOLOGY AND THE SCIENCE OF CREATIVE INTELLIGENCE

Maharishi Mahesh Yogi has proposed that the normal state of man is a higher state of consciousness in which the full value of the qualities of the relative field of existence can be enjoyed together with the infinite value of the Absolute field, and that transcendental meditation can enable any individual to grow to this state by bringing his mind to the transcendental field of pure Being. This paper presents a theoretical model of the structure of creative intelligence according to Maharishi, and discusses the unfoldment of creative intelligence in human life. This model is related to current psychological theories, to Eastern religions. Transcendental meditation, as a practical tool to facilitate psychological growth, is compared to other programs of growth or therapy. This thesis implies that transcendental meditation expands the conscious mind and liberates the individual from the effects of stress.

Hoomes, Charles Wendell (EdS, Guidance and Counseling, June, 1972)

A STUDY TO DETERMINE IF THERE IS A SIGNIFICANT DIFFERENCE BETWEEN STUDENTS WHO DROP-OUT OF THE ELECTRICAL CONSTRUCTION AND MAINTENANCE COURSE AT CARROLL COUNTY AREA VOCATIONAL-TECHNICAL SCHOOL AND THOSE WHO COMPLETE THE COURSE AS MEASURED BY THE CALIFORNIA TEST OF ADULT BASIC EDUCATION

A t test of independent means was conducted to determine if a significant difference existed between the means of the two groups after a F ratio revealed that the samples were drawn from a population with the same variances. The t test revealed that a significant difference did exist, not caused by chance alone, and that the group completing the program scored higher than the group dropping out of the program before completion. The results of this study indicate that poor skills in mathematics decreases the probability of student success.

Rowell, Judy Copeland (EdS, Guidance and Counseling, June, 1973)

DEVELOPING A PRE-SCHOOL ASSESSMENT PROGRAM

The purpose of this project was to develop a comprehensive information-gathering program that would also serve as an orientation for students, parents, and first grade teachers at Bowdon Primary School, Bowdon, Georgia. A planning committee was provided with a review of related literature. A battery of tests was administered to three groups of kindergarten-age students and results were made available to parents. Developmental grouping for first grade work was based

on these results. Students, parents, and first grade teachers participated in orientation activities. Participants in the program evaluated it as successful, worthwhile, and worthy of continuation.

Bellafiore, Stephen Louis (MA, Psychology, August, 1972)

ON SILENCE

Silence is a basic phenomenon, the first born of all the basic phenomenon. She is an ever present reality surrounding the other basic phenomena with her presence. By her very nature she is profoundly speaking to man. The purpose of this paper is to paint a picture, through the symbolic imagery of language, built on the foundation of dialogue, academic pursuit, and personal imagination, in the hope of widening the horizon of man through the phenomenological significance of silence.

I attempt to explain the dimensions of silence in relationship to its world and to the inner depths of man's heart, the still point. Man's relationship to the silence is explained through an exploration of primeval man, nature and silence, the mystic, and finally modern man. Five conversations born out of lives dedicated to an existential confrontation with the silence will terminate this paper presenting living testimony of the challenge of silence.

The thesis is that through a man's encounter with the silence, an existential silence, in dialogue with the inner life of the world and himself, that spiritual realm, that last frontier, will the hope of spirit-charged-meaning-made-flesh emerge for man.

Clark, Stephen Kay (MA, English, August, 1972)

A THEMATIC ANALYSIS OF ROBERT LOWELL'S *FOR THE UNION DEAD*

The purpose of this thesis is to submit that Robert Lowell's 1964 volume *For the Union Dead* is pervaded with frustration and symptomatic of a distressed poet, a point overlooked or at least minimized by various critics. For the critics, the most important aspect of the volume is that Mr. Lowell ventures into areas of public concern and away from the confessional poetry, a type poetry he began in his *Life Studies* (1959) and which is characterized by painful recall of personal problems. Several critics contend, then, that the inclusion of poems with public themes—specifically, socio-cultural and religious—indicates that Mr. Lowell is not as obsessed with baring intimate details of his life and is thus relieved of the frustration accompanying such disclosure. I submit, however, that the nature of the impersonal poems pose as great a source of frustration for the poet and actually increases it, since they are concerned generally with the dehumanization of man in a mechanized, militaristic world or with the absence of a benevolent God. All the major thematic areas of the volume interrelate, therefore,

to characterize *For the Union Dead* as a manifestation of Mr. Lowell's overall distress.

In Chapter One, Confessional Themes, we discover the basic frustration of Mr. Lowell through an analysis of various confessional poems. The poet is painfully concerned with the recollection of an unhappy marriage, of guilt-provoking adolescent incidents, and of his poor relationship with his parents. In Chapter Two, Socio-Cultural Themes, we find that one of Mr. Lowell's major areas of non-confessional concentration, concern with society, offers him no relief. When the disturbed private figure looks outside himself into the world with its wars, relentless mechanization, and dehumanization generally, his frustration is increased. In Chapter Three, Religious Themes, through a review of Mr. Lowell's religious evolution, which runs from New England Protestantism to Roman Catholicism to a general disenchantment with Christian doctrine, we find in appropriate poems that God is impetuous and not concerned with man, or in the idea that God does not exist at all. The poet's allusions to a fear of the finality of death seem to indicate the latter alternative is his belief. At any rate, we see through an extended thematic analysis of the volume that Mr. Lowell's basic distress is compounded, and any balancing or relieving aspect of the public themes is offset by the frustrating implications they carry.

Cockerham, Raymond (EdS, Guidance and Counseling, August, 1972)

READING ABILITY AND THE HIGH SCHOOL DROP-OUT

This study examined the relationship between the effect of reading ability on I.Q., achievement, self concept, attitude and interest in school. It also gave some specific suggestions on what can be done to improve reading disabilities. Pertinent literature on the subject was reviewed and many students' permanent records were studied. This study revealed a very high correlation between reading ability, I.Q. and school achievement. The evidence indicated that disabled readers are usually frustrated in most classes. They likely have repeated one or more grades in school. As a result of their repeated failure in school, they are likely to join the drop outs, a group that now constitutes almost one-half of the students who enter Georgia schools. This study had implications for the counselor's role in assessment, placement, and counseling of students.

Cornish, Joseph Jenkins, III (MA, Psychology, August, 1972)

AN EXAMPLE AND AN ANALYSIS OF
THE EUREKA PHENOMENON

The creative process known as the 'Eureka Phenomenon' is investigated by examining a series of the author's experiences. The series of experiences and events led to a geometrically significant comparison between the shape of the megalithic monument at Stonehenge and the shape of the qabalistic Tree of Life.

The events are described and their significance to the author during the process of developing the geometric comparison is defined. The events are also pictured in a graphic network in order to show their interrelationship to each other.

A conclusion is presented which proposes that six steps can be defined as parts of the process producing the 'Eureka Phenomenon'. These steps are compared to descriptions of the creative process described by other writers.

Cowart, Luther Carl (EdS, Guidance and Counseling, August, 1972)

STUDENT REVISION: A METHOD OF FACILITATING MATURITY IN WRITING

The purpose of this study was to determine whether students would improve more in their writing maturity through a program of student revision than through the traditional method of teacher correction. The sample was comprised of a control section and an experimental section of the ninth grade at Villa Rica (Georgia) High School.

Each group received the same instructions about writing prior to the assignment of eight descriptive paragraphs based upon literary models chosen by the teacher. The teacher corrected the papers of the control group and returned the papers to the students so they could make indicated changes and further improvements as the students saw fit. The papers of the experimental group were returned unmarked, with instructions to revise the papers by using stronger verbs, by eliminating vague or ambiguous nouns and be using more explicit modifiers.

An important assumption of this study is that the T-unit, or independent clause, and certain grammatical constructions related thereto, as brought out in Kellogg W. Hunt's 1965 study, represent a valid measure of maturity in writing. This study is based upon that assumption.

Prior to the experiment, the teacher assigned two themes to each student, with each theme of sufficient length to provide at least 25 T-units from each student on each theme. The better of each pair of themes was chosen on the basis of the highest frequency count of Hunt's listed grammatical constructions being considered in the data. The same procedure was followed at the end of the experiment.

After counting the constructions used, this researcher converted the raw frequency count scores to weighted scores so that the less frequently used constructions would count more and the most frequently used constructions would count less. Then, the *t* test of statistical significance was applied to determine that the improvement noted was due to the treatment, and not to chance.

This researcher reached the conclusion that the students who were subjected to the revision treatment improved a statistically greater amount than did the students in the control group, but the students in the letter group also improved from the teacher-correction program.

Cruce, Michael M. (MS, Biology, August, 1972)

COMPARATIVE PHYSIOLOGICAL AND ULTRASTRUCTURAL STUDIES OF CALCIUM METABOLISM IN LIVER AND KIDNEY OF NORMAL AND GREY-LETHAL MUTANT MICE

Comparative electron microscopic analysis of mitochondrial volume in kidney tissues of grey-lethal mutant mice and normal mice is correlated with 45Ca uptake experiments in liver and kidney tissues of the mutant and normal mice. Results reveal greater mitochondrial volume in mutant than in normal tissues, and 45Ca uptake also appears greater in mutant tissues. The significance of these findings is discussed in relation to parathyroid function, mitochondrial metabolism, and the pleiotropic effects of the mutation.

Deloach, Jimmie Carlton (MA, Mathematics, August, 1972)

CONVERGENCE SPACES

The goal of the author was to investigate the basic properties of convergence spaces. This was done by researching the literature and by solving problems which occurred.

Two theories of convergence spaces are included in his thesis. One theory uses a filter approach and the other uses a net approach. The filter approach (Chapter III) is based chiefly on papers by Fischer and Poppe. The author also defines the Lindelöf property for convergency spaces (Definition 3.39). One of the main theorems discovered by the author states that every compact convergence space is Lindelöf (Theorem 3.40).

Chapter IV contains the material on the net approach. Here the conditions for various types of net convergence are given and continuous functions are investigated.

Dossey, Steven Monroe (MA, Psychology, August, 1972)

THE RIVER: A SYMBOL FOR A WAY OF LIVING

The meaning of the river as a metaphysical symbol, provides an intuitive insight into man's relation to and understanding of the nature of consciousness and the cosmology of the universe. The river, when understood in its manifold meaning, provides a philosophy of harmonic living which enables one to live a psychologically healthful existence. The intuitive meaning of the river symbol is related to Eastern philosophies such as Hinduism, Buddhism, and Taoism. Finally, a process whereby a person may attain a greater awareness of himself and his world by understanding the nature of the symbolizing mind is presented as it generates from the meaning found in the river as a symbol.

Howren, Sara Orr (EdS, Elementary Education, August, 1972)

A COMPARISON OF MATHEMATICAL ACHIEVEMENT USING TUTORIAL VERSUS REGULAR CLASSROOM INSTRUCTION

In an effort to meet the needs of the average and above average learners as well as the under-achievers, an experiment was conducted at the Elizabeth Elementary School, Cobb County, Georgia. Two sections with fifty students assigned by the principal at random, were involved in the five weeks project during a study of decimals. These children were administered the Iowa Tests of Basic Skills along with all sixth grades countywide. The experimental group used a tutorial system while the control group received regular classroom instruction.

A research of the literature indicated tutoring resulted in higher academic achievement. Self-concepts improved and attitudes changed favorable due to the personal attention and individually prescribed instruction which led to a more conducive learning situation.

The experimental group was composed of twenty three students with eleven scoring 6.2 and above and being classed as average and above average. These were selected to tutor the twelve underachievers. The criteria for selection was the mathematical scores of the Iowa Tests of Basic Skills. The tutors received fifteen minutes of instruction through examples and with discussion of suitable tutoring activities before the class period. The class as a whole then received fifteen minutes of basic instruction which was followed by tutoring as a reinforcement of the teacher's instructions to the group.

The control group was composed of thirteen underachievers and fourteen average and above average achievers according to the same criteria as the experimental group. They received only regular traditional classroom instruction during the entire class period.

Both groups were administered the same criterion reference test as both pretest and posttest. Progress tests were given as a phase was completed. A t test on the pretest showed no significant difference in the two groups and the t test on the posttest showed no significant difference in the two groups. At the conclusion of the project a t test showed no significant difference in gains in achievement of the two groups due to the tutorial system as the .58 score was not significant.

Although the data did not show a significant difference between the classes academically, individual gains were evident which in some cases were beyond the teacher's expectations. Self-confidence and attitudes improved.

A larger group study over a longer period of time would possibly give more positive results. Better training of tutors and more structured materials for their use should aid such a project. Further study along these lines should be of value.

Hunt, Betty R. (EdS, Secondary Education, August, 1972)

A COMPARATIVE STUDY OF THE RELATIONSHIPS OF CERTAIN BEHAVIORS TO THE TEACHING OF THINKING IN SOCIAL STUDIES WITH SELECTED SEVENTH AND EIGHTH GRADE STUDENTS IN THE GORDON COUNTY SCHOOLS

An Experimental Group and a Control Group, each consisting of six students with superior ability, comprised this nine-weeks research study that provided for critical thinking would result in student increase in critical thinking, positive attitudes toward social studies, and positive behavioral patterns. The following three tests were administered to the students: (1) Remmers' Attitudes Toward Any School Subject, (2) the Wassermann Student Self-Rating Instrument, and (3) the Watson-Glaser Critical Thinking Appraisal.

The following null hypotheses were tested: (1) There will be no significant difference between the Experimental Group and the Control Group with respect to changes in attitudes toward social studies as a result of work done in a nine-weeks period; (2) As a result of the differential treatment of the two groups, there will be no significant differences in the rate of change from negative to positive behavior as judged by (a) teachers and (b) students; and (3) There will be no significant difference between the Experimental Group and the Control Group with respect to an increase of critical thinking skills as a result of the differential treatment of the two groups.

From analysis of data, computed by the t test, the first hypothesis that there will be no significant difference between the Experimental Group with respect to changes in attitudes toward social studies as a result of work done in a nine-weeks period was accepted. The second null hypothesis that as a result of the differential treatment of the two groups, there will be no significant difference in the rate of change from negative to positive behavior as judged by (a) teachers was rejected as the t-ratio of 3.5 was significant at the .01 level; however, as judged by (b) students was accepted. The third null hypothesis that there will be no significant difference between the Experimental Group and the Control Group with respect to an increase in critical thinking skills as a result of the differential treatment of the two groups was rejected as the t-ratio of 2.65 was significant at the .05 level. In the comparison of the within group means, the Experimental Group had significant differences on all variables, whereas the Control Group had no significant differences.

Miller, Melvin E. (MA, Psychology, August, 1972)

MYTHS OF THE AQUARIAN AGE

Man has been constructing myths for ages and this alleged "Aquarian Age" is no exception. This thesis intends that myths and symbols have so thoroughly permeated man's thinking that he often takes these conventions to be a description or direct manifestation of an ultimate

reality. This paper is therefore a critical inquiry into the origin of myths and symbols, as well as an elucidation of the manner in which myths determine what we take to be reality. A number of contemporary myths are discussed as they have evolved from their origin to the present, while simultaneously revealing how they are merely recent rarefactions of ancient mythological themes. An integrated vision of the myriad of possibilities for a 'new' myth is presented with the implicit hope that the invitation for future attention, inquiry, and analysis into the mythic process will be accepted with a fully human sense of responsibility by all the disciplines that create myths for man.

North, Ralph S. (Ed.S, Secondary Education, August, 1972)

THE EFFECT OF SIMULATION ON ACHIEVEMENT AND ATTITUDE WHEN USED TO SUPPLEMENT THE LECTURE-DISCUSSION METHOD OF INSTRUCTION IN A TENTH-GRADE CLASS OF MODERN EUROPEAN HISTORY

Using two classes of twenty-eight students each this study attempted to discover if simulation resulted in significant gain in attitude and achievement when used to supplement the lecture-discussion method of instruction. The null hypothesis was used. The two intact classes were determined to contain no significant difference through the t test for the difference between means computed on pretest scores from form A of the Modern European Test of the Cooperative Social Studies Series. The Any School Subject Attitude Survey of the Purdue Attitude Survey Series was administered. A nine week treatment followed with one class taught by lecture-discussion using twenty days of supplementary simulation. At the end of the treatment forms B of the Modern European History Test and the Any School Subject Attitude Survey were administered as posttests. Appropriate statistical treatment found no significant difference in attitude but a significant difference in achievement at the .05 level. The null hypothesis was rejected.

Pritchard, James Warren (MA, Psychology, August, 1972)

SELF-REFERENT EXPRESSION IN SMALL GROUPS A COMPARATIVE STUDY

A movement from non-self-reference to self-reference in verbal utterances, taken by Rogerian theorists as evidence of successful client-centered therapy, was found in this study to have occurred among members of an encounter group. The findings suggested that people who see themselves as disturbed and people who see themselves as psychologically healthy both have movement to make on this scale, whether toward health or toward personal growth. The findings also suggested that group encounter, as client-centered therapy, can be effective in helping people move, in Rogers' terms, "from fixity to changingness, from rigid structure to flow, from stasis to process."

From a different perspective—that of Bugental and other existential psychotherapists and philosophers—the findings suggested that as a person makes increasing reference to himself rather than to things that are not himself in an intensive, affective situation, the change reflects his becoming a more responsive and responding subject rather than a buffeted object in his way of being in the world.

The findings indicated that group encounter members moved from non-self-reference to self-reference in greater degree than members of a discussion group devoting themselves to an intellectually structured examination of ways to personal growth or than members of a classroom group measured for comparison. Caution was exercised, however, in conclusively attributing any single cause to this movement. Speculation as to cause ranged from reinforcement and conditioning responses, to group members having practiced collective Rogerian therapy on each other, to an existential learning theory which saw in the process of group encounter experiential similarities with the more cognitive ventures of existential philosophy. The latter was given the most attention in suggesting factors as work.

Rhodes, Carolyn Bates (EdS, Secondary Education, August, 1972)

A HISTORIOGRAPHICAL STUDY OF SELECTED AMERICAN HISTORY TEXTBOOKS IN REGARD TO INTERPRETATIONS OF THE CAUSES OF THE AMERICAN REVOLUTION, THE JACKSONIAN ERA, AND THE CAUSES OF THE CIVIL WAR

The purpose of this research project was to determine whether or not American History textbooks have an inner consistency of interpretations in regard to the causes of the American Revolution, the Jacksonian Era, and the causes of the Civil War. A secondary purpose was to determine whether the interpretations presented are up-to-date historiographically.

Materials written by various authorities as Greene, Pessen, Pressly, etc. in each historical area were closely examined to establish criteria by which the interpretations presented in the eighteen textbooks selected from the 1971 Georgia textbook list could be identified. After having established the criteria and having examined the textbooks to determine their particular interpretations, the conclusions of this project were made.

It was concluded that textbooks generally present consistent interpretations of these three historical periods, although, the interpretations presented were out-dated historiographically.

Rogers, William Wendell (EdS, Guidance and Counseling, August, 1972)

AN EVALUATION OF THE COORDINATED VOCATIONAL ACADEMIC EDUCATION PROGRAM AT DOUGLAS COUNTY HIGH SCHOOL

This study is an investigation to see if an innovative program was effective with potential school dropouts. The areas involved in the evaluation of the Coordinated Vocational Academic Education program were school attendance, grade point average, and change in attitude towards dropping out of school. Results indicate that the program was successful.

Short, Andrew Earl (MA, Psychology, August, 1972)

COMING TO GRIPS WITH MY WORLD: MEANING FORMATION AS AN INTERSUBJECTIVE PHENOMENON

This project hypothesized that meanings which are prereflective to 'vertical, verbal man' are available to reflection through non-verbal, physical contact relationships based upon a non-vertical posture. I examined Cartesian dualism's implications for psychology's development as a human science and Maurice Merleau-Ponty's concept of "flesh" as an alternative which posits man's unity prior to dualization. Intersubjectivity emerged as crucial for meaning-formation, although verbalization was viewed as a less reliable vehicle for such formation than bodily movement. Four female and eight male college underclassmen participated in physical and verbal dyads and in small group discussion of their behavior. Their observations during the experiment, their descriptions of their experiences on questionaires, and my own observations appear to support my hypothesis.

Shurling, Sylvia Bowen (EdS, Elementary Education, August, 1972)

A THREE YEAR LONGITUDINAL EVALUATION OF THE RESULTS OF AN INTENSIVE READINESS PROGRAM, FOLLOWED BY A MODIFIED LINGUISTIC READING PROGRAM, WITH DISADVANTAGED CHILDREN WHO WERE DIAGNOSED AS POOR RISKS FOR FORMAL ACADEMIC WORK

To determine the effectiveness of grouping children considered not ready for formal academic instruction, a longitudinal study was begun in Cobb County, Georgia, in 1969, as part of a federally spon-

sored program, Project Success. The investigator followed the progress of an experimental group for three years. Data was collected through questionnaires, testing instruments, and personal interivews with parents, students, teachers, project personnel, and school personnel.

Subjects for the experimental group were selected on the basis of IQ tests, readiness tests, and teacher observation. These subjects were then placed in a special learning situation, referred to in the project as Developmental First and Developmental Second. Both Developmental classes were designed around a flexible schedule, a relaxed classroom atmosphere, an intensive readiness program, a modified linguistic approach to reading, and learning materials selected especially for each child's individual needs. No child was pressured into a situation where he would meet failure and become frustrated. The classroom teacher was aided by the project's Learning Specialist, Psychologist, psychometrist, and Child Development Counselor in diagnosing the child's needs and providing a prescriptive program for him.

There were 19 subjects in the experimental group in 1969-1970. Because of the phasing out of the original Project Succuss school, the investigator was unable to follow the original 19 subjects for three years. The second year 13 subjects remained in the project school and 11 subjects remained the third year. Project Success ended in June, 1971. During the third year of the experiment the sugjects were placed in regular classroom situations and given no special help.

The investigator attempted to answer three questions:

1. Will the results of the Metropolitan Achievement Test indicate the subjects who completed Developmental First were on grade level at the time of first year post-testing?
2. Will the results of the Metropolitan Achievement Test indicate the subjects who completed Developmental First were on grade level at the time of the second year post-testing?
3. Will the results of the Metropolitan Achievement Test indicate the subjects who completed Developmental First were on grade level at the time of the third year post-testing?

Two basic assumptions were made. The first was that these subjects were not ready for formal academic work and the second was that they were representative of the larger national groups of educationally disadvantaged.

The final results from the study indicated that the subjects were not on grade level at the end of the third year. At the time of post-testing the first year, they were above grade level, the second year they were less than a month below grade level, but the third year they dropped down to six months below grade level. While in a special classroom situation, the experimental subjects made progress. The study indicated the subjects were unable to make the transition to a regular classroom situation and continue to progress.

Smith, William Lee (MA, Psychology, August, 1972)

A GROUP SCALE OF HYPEREMPIRIC SUSCEPTIBILITY A PRELIMINARY INVESTIGATION

The study was conducted to develop a group scale of hyperempiric susceptibility. Fifty-five male and female subjects enrolled in Psychology 103 at West Georgia College, Spring Quarter, 1972, were administered the Harvard Group Scale of Hypnotic Susceptibility and the Group Scale of Hyperempiric Susceptibility utilizing a counter-balanced group design. The hyperempiric scale was composed of seven original items and five items from the hypnotic scale. Kuder-Richardson Formula 20 reliability coefficients, Student's *t* ratios for related measures, and Pearson Product-Moment correlation coefficients for the relationship of the two scales were employed for analysis of the data.

The reliability for the Group Scale of Hyperempiric Susceptibility was found to be 0.72 for all items and 0.87 for the scale with the items from the Harvard Group Scale of Hypnotic Susceptibility deleted. The reliability for the Harvard Group Scale of Hypnotic Susceptibility was found to be 0.81 which was comparable with the reliability reported in the manual ($r=$ 0.82) (Shor and Orne, 1962).

The Pearson Product-Moment correlation coefficient for the comparison of the Group Scale of Hyperempiric Susceptibility with the Harvard Group Scale of Hypnotic Susceptibility was found to be 0.27 ($z=2.03$) which demonstrated that the two scales were significantly related.

There were no significant differences found between the Group Scale of Hyperempiric Susceptibility and the Harvard Group Scale of Hypnotic Susceptibility utilizing the Student's 't' ratio for related measures. There was no data present to support any statement for the validity of the Group Scale of Hyperempiric Susceptibility.

Spears, Ann Saywell, (EdS, Secondary Education, August, 1972)

AN OUTLINE FOR THE FOUR REQUIRED COURSES IN ENGLISH FOR THE ROME CITY HIGH SCHOOLS

This project develops a sequential English program of language, literature, and composition within four quarter courses that will be required of all ninth and tenth grade Rome City High School students reading on or above their grade level. The four courses teach the basic concepts, skills, and terminology necessary for more advanced high school work. The guide also includes a logical sequence of experiences and activites to develop these concepts and to increase proficiency in the language skills.

The first course, Course A, reviews grammar and usage skills, and develops descriptive, narrative, and expository writing and speaking skills. In addition, there are suggested procedures for dictionary usage, vocabulary development, library study, and effective notetaking. Works of literature are suggested to correlate with such writing assignments as a persuasive paper, a comparison theme, and an autobiographical sketch.

Course B introduces the student to the various elements of literature—plot, conflict, characterization, setting, theme, tone, and symbolism. The emphasis is on perceiving how an author combines these elements to create a unified work. The poetry unit deals with the vocabulary of poetry. Selected works are suggested.

Course C continues with the language and composition skills of the first course. This course, however, proceeds from the typical faults of sentence construction to the more complex and subtle matters of structure, style, and euphony. Emphasis is on the connotation of words, along with a series of suggestions for study of the history of the English language and dialect study.

Course D is based upon Northrop Frye's critical theory of narrative patterns in literature. This guide organizes the "Internal Forms" material of the Georgia *Design for an English Curriculum* into chart form and gives illustrations for the patterns of Romance, Irony, Comedy, and Tragedy. Composition evolves out of the application of this theory to selected works of literature.

Each course begins with a statement of the overall purpose and a list of the behavioral objectives. A general introduction precedes the content section of the guides. Each guide concludes with some suggestions for evaluation and a bibliography for the teacher.

Stanley, Gloria Meadow (EdS, Secondary Education, August 31, 1972)

THE EVALUATION OF UNITED STATES HIGH SCHOOL HISTORY TEXTBOOKS IN REFERENCE TO CONFLICTING INTERPRETATIONS OF TWENTIETH CENTURY FOREIGN POLICY

This study had a two-fold purpose. First, to examine conflicting interpretations of five aspects of twentieth century United States foreign policy. A second purpose was to examine high school history textbooks and to determine whether they devoted ample space to twentieth century foreign policy, as well as whether the textbook interpretations were based on historical data.

After the study was completed, the following conclusions were drawn:

1. Textbooks devoted adequate treatment to American foreign policy in the twentieth century.

2 Textbook writers consistently presented American foreign policy from the traditional interpretation, while the New Left and

the revisionist interpretations were not as evident in most textbooks.

3. There was some incongruity in the texts in regard to the amount of detail, visual aids and interpretation given to twentieth century foreign policy.

4. Textbooks varied between, as well as within, the different levels of reading difficulty in regard to the sophistication with which they presented American foreign policy.

5. Textbooks exhibited both strengths and weaknesses in the presentation of twentieth century foreign policy.

6. Textbooks tended to be patriotic or chauvinistic rather than critical or America's foreign policy.

Willingham, Mary Lynn (EdS, Secondary Education, August, 1972)

A STUDY OF BACKGROUND CHARACTERISTICS OF PUPILS WITH NEGATIVE ATTITUDES TOWARD READING VERSUS THOSE WITH POSITIVE ATTITUDES TOWARD READING

An attitudes toward reading scale, developed by Thomas H. Estes, was administered by the reading teacher to the seventh grade English classes of Cedartown Junior High School, Cedartown, Georgia. The scales were scored according to the method prescribed by Estes. The highest ten per cent of the scores were chosen for study as the group having positive attitudes toward reading; the lowest ten per cent of the scores were chosen for study as the group having negative attitudes toward reading. Study was made of school permanent records and telephone interviews with parents to determine differences in background characteristics between the two groups.

The information was statistically analyzed by use of the *t* test and the Chi-square test. Results showed statistically significant differences between the two groups as follows:

1. The negative group had a greater mean days absent in the seventh grade.

2. The negative group had a lower mean reading level in the seventh grade.

3. The negative group had parents with a lower mean of education.

4. The negative group had a greater mean of boys.

5. The negative group had a lower mean of use of the public library.

6. The negative group had a greater mean of help with homework.

Creaghan, Madeleine C. (MA, Psychology, December, 1972)

A COMPREHENSIVE PSYCHOLOGICAL STUDY OF A PREOPERATIVE MALE TRANSSEXUAL

This study presents and discusses material gathered during seven interviews with a 35 year old preoperative male transsexual. A biography

from childhood to the present was obtained and related to a review of the literature. The subject was administered projective and non-projective tests and a psychological evaluation based on these results is given. Finally, it is shown that there is reason to doubt the authenticity of some of the subject's verbal accounts and further, that it is questionable whether surgery ever should or will be performed on this individual.

Miller, Marlene Walker (MA, Psychology, December, 1972)

INDIVIDUALS' RESPONSE TO AFFECTIVE MASSAGE

According to this thesis, massage is a somatic 'technique' promoting integration and personal growth by working directly with, through, or upon the physical body. From experiencing their body as a source of pleasure during massage, individuals feel more positive about their bodily being and experience a positive shift in body/self image. This positive identification with one's body helps a person regain contact with bodily (sensual) energy. Therapy, or any process that helps individuals know themselves, must recognize the significance of touching and the importance of awakening the senses for full human development. Massage is such a growth experience, encouraging people to be more accepting and more aware of themselves.

The intention of this thesis is to explore how individuals respond to full body massage, and includes an analysis of personal descriptions of massage as well as a description of the masseuse's experience. This study describes different responses based on these operational definitions:

> Receptive individuals are considered to be those who surrendered to the massage process and felt their consciousness working in a different way. Receptive people would experience a positive shift in self image, pleasant and/or unusual body sensations, freer energy flow, and greater integration. They would feel more whole and more connected with their bodies.
>
> Individuals who responded to particular body sensations and who focused attention on body parts and specific strokes are considered to be those who would notice changes in breathing and especially tense or sensitive areas. They would be aware of some release of tension that would free energy, and they would feel more relaxed. These people would also mention some positive shift in body image.
>
> Individuals who resisted full involvement with the massage experience are considered to be those who remained in control and observed the procedure. They would only be aware of tension and areas of pain and would possibly feel more relaxed and comfortable following the massage.

To explore these assumptions, twenty people were given a full body

massage and asked to write "as fully detailed a description as possible" of their experience. Five judges analyzed the content of these descriptions in accord with the categories as defined in the instructions to the judges. The original trends predicted were confirmed by the judges' analysis of the descriptions.

Administering the Body Cathexis Questionnaire and the Draw a Person Test to individuals in a pilot study provided additional evidence that people express a positive shift in body image (defined as the inner experience of 'self') following a massage.

The masseuse's experience of giving a massage is briefly discussed as moving meditation. Massage can be understood as a practice in awareness, in attunement with human nature, and in being available to perceptions. Massage opens new possibilities for heightened awareness—physically, emotionally, and spiritually.

Starnes, Oren Brown (MA, Psychology, December, 1972)

THE RELATIONSHIP OF A MEASURE OF SECURITY AND A MEASURE OF SELF-ACTUALIZATION

The study investigated the relationship between the Security-Insecurity Inventory (S-I) and the Personal Orientation Inventory (POI). The hypothesis tested was that there is a positive relationship between the scores attained on the S-I and the scores attained on the POI. Fifty-five volunteer subjects took the S-I and the POI inventories. Pearson product-moment coefficients were calculated to establish the relationship between the scores attained on the S-I and POI. There were no statistically significant correlation coefficients established between the S-I and the scales of the POI. Accordingly the hypothesis tested in the study was rejected. Reason was found to suspect the validity of the POI score data and, consequently, also, to suspect the validity of the results of the study. The conclusion rejected the hypothesis tested and pointed to the necessity of additional studies on the hypothesis tested and on the "fake ability" of the POI.

Ragsdale, Edward Stanton (MA, Psychology, December, 1972)

MAN IN TIME—TIME IN MAN

With every step man takes, every word he utters, every thought he thinks, every pronouncement he makes, every position he holds, he moves within the matrix of time and eternity. To the extent that he is alive, he is vulnerable. To the extent that he is vulnerable, he is open to change and able to ride with time. To the extent that he can move with time and change, even for a moment, he can glimpse at the timeless.

He sees himself outside of all that which he is conscious of. Born into, and baring himself to, a world of apparent diversity and multiplicity, he seeks to unify it. He observes, and perhaps creates, continuities and patterns in trying to order his world across space and time. Yet the greatest discontinuity, the greatest point of dissonance he experiences is his own existence. For he now sees himself alone and apart. He sees a friend scrape his elbow yet it doesn't hurt him. He knows his thoughts and feelings are not essentially accessable to others, without at least his invitation. He experiences this same inaccessability in others. His life is comprised of a partial glimpse. While perhaps cherishing and fostering his separateness he is hurt by it.

But now conscious of it, outside of it, it is his lot, his desire, to *think* about it. For while actions are soon forgotten, reasons for actions, maybe because they are unreal, yet remain. Reasons, he hopes, might last forever. So to overcome the dissonance of ephemerality, diversity, multiplicity, his sense of alientation, and his awareness of his own mortality in the world of action, he seeks reasons. These are his patterns, his continuities, his justifications, his excuses. He gets so enthralled that he begins to assume that the reasons, and reason, are somehow constitutive of actions.

It is as if one wave of being in the Parade that is without beginning or end, stepped over to the curb to get a better view of more of Itself. It, hereafter to be called "he," could thus see Itself pass by. He could see It begin as It came into sight and end as It disappeared from sight, and made up names for the parts of It that he saw pass. And thus he came to see time. And as parts of it moved closer to him and then farther away from him, he came to posit space and distance. And he wondered where It came from and where It was going, beyond his all too near horizons. Soon he began to see similarities and maybe even repetitions in the parts of It. Some parts he liked more than other parts, and he hoped that those parts or other parts like them would come back soon. Sometimes he worried that they wouldn't come again. And as he continued to watch the Parade progress, he came to forget that he was still part of It. Having forgotten this, he was upset, and he sought to join in, and he began to run along beside the Parade, trying at least to keep abreast of It. But when he rushed to keep up, It slowed down; when he slowed to Its pace. It speeded up. He eventually grew tired and rested, and soon he forgot. And as he forgot he remembered. And as he remembered he came to join back in.

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MICE, MEN AND GODS

by Y. LYNN HOLMES*

When one now thinks of our modern pest control programs, the frightened housewife and the experimental laboratory, it is very difficult to conceive of a time when the small furry rodent, which we call a mouse, could ever have been in a place of importance. However, if one reads carefully through the literature of ancient Israel, Anatolia, Mesopotamia, Egypt and Greece, it becomes quite evident that the little mouse was a rather important and frequent participant in the religious lore of the ancient world.

One of the best known of these "mice" tales appears in I Samuel 6 where there is the occurrence of the five golden mice. You will of course remember that the Israelites carried the Ark of the Covenant into battle against the Philistines with the full hope that this holy object would bring them better military fortune than they had had before. Such hope was in vain, because the Philistines not only defeated the Hebrews, but also captured the sacred Ark and carried it to the temple of their god Dagon. Soon, however, they began to have trouble with Dagon falling, and their bodies became afflicted with a plague of hemorrhoids. With this problem occurring, the Ark was passed from one Philistine city to another with the plague following it to every place. The decision was then made to send the Ark back to the Hebrews, and the text states that five golden hemorrhoids and five golden mice were made to accompany the ox-drawn cart carrying the sacred Hebrew shrine.

There are numerous questions which should be asked in connection with this story, and not the least of these is why five golden mice should appear. In the story the explanation is made that the golden mice and hemorrhoids are to be a guilt or trespass offering to the God of Israel.[1] It is not so difficult to understand why the golden hemorrhoids appear, because the ancient concept of sympathetic magic would be interpreted as having the golden hemorrhoids to portray the real hemorrhoids which would be leaving from the afflicted people as the Ark and the golden hemorrhoids leave the land of the Philistines. This still does not answer the question about the mice, because no relationship has been seen between them and the hemorrhoids and the troubles of the Philistines.

To answer this question, numerous suggestions have been made. H.P. Smith regards the references to the mice as a reaction and consequently removes them whenever they appear. A more frequent answer, which has been supported by Biblical scholars, such as Julius Wellhausen, and medical doctors alike, is that the pestilence on the Philistines was the bubonic plague and that the hemorrhoids were

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[1] I Samuel 6:4 (trespass offering)

plague buboes.[2] This theory received particular attention from W.J. Simpson in his *A Treatise on Plague* and from *Topley and Wilson's Principles of Bacteriology and Immunity.* A more recent and different picture has been offered by J.F.D. Shrewsbury of the Department of Bacteriology at the University of Birmingham. In his article called "The Plauge of the Philistines," he points out that the balck mouse which carried the plagues of the Middle Ages used human dwellings for its breeding and living and thus came into close enough contact to pass the bubonic plague on to humans. The mouse of the ancient world, however, was a brown mouse which inhabited the fields and consequently could not have come into close enough contact to give the plague to humans. He therefore concluded that there was no connection between the hemorrhoids and the mice.[3]

Agreeing with Shrewsbury, the Septuagint gives what is probably the best explanation to this perplexing problem. In the story which is told there, mice appear more frequently than in the Hebrew text. This same thing is also true of the Vulgate. For example, in I Samuel 5:6 the Greek text has an addition to the Hebrew text and reads as follows: "And in the villages and fields in the midst of that country, there came forth a multitude of mice." Another addition occurs in I Samuel 6:1 and states "their land swarmed with mice." An addition also appears in I states "their land swarmed with mice." An addition also appears in I Samuel 6:5 where it relates that the objects were made in the "likeness of the mice that have destroyed the land." It should also be noted that the Hebrew text in this particular verse also includes the destruction of the land as a part of the Philistine plague. Thus according to the tradition of the Septuagint and the Vulgate, there were two plagues, one which afflicted the body with hemorrhoids and the other which brought mice to ravage the land.

This same type of explanation is given by Josepheus. In commenting on this passage, he states that "as to the fruits of their country, a great multitude of mice arose out of the earth and hurt them and spared neither the plants nor the fruits."[4] Later he states that they made five golden mice "like to those that devoured and destroyed their country."[5]

It must also be mentioned that this is not the only time that mice appear in Hebraic literature. One passage occurs in Leviticus 11:29 the mouse is mentioned along with other burrowing animals as being

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[2] *Interpreter's Bible,* II, 905.

[3] J.F.D. Shrewsbury, "The Plague of the Philistines", *Journal of Hygiene,* XLVII (1949), p. 245.

[4] Josepheus VI, i, 171. Such a plague as this was not uncommon in the ancient world. Aelian records that an invasion of fieldmice drive certain people in Italy from their native country and made them exiles, as a drought or frost or some other unseasonable event might have done by shearing away ears of corn and cutting through the roots (See Aelian, *On Animals*, XVII, 41).

[5] *Josepheus* VI, 2, 172.

unclean. A more interesting passage appears in Isaiah 66:17, but unfortunately the reference is brief and unclear. Here the mouse is eaten by a group in the garden who are also eating swine's flesh and detestable things. This seems to be telling about the ritualistic practices of an apostate group, and it is quite possible that the mouse was regarded as sacred by them and that it was eaten sacramentally. It is also interesting that there is a proper name which comes from the Hebrew word for mouse. This name appears in Genesis 36: 38 and 39 and I Chronicles 1:49 as a name of an Edomite king and in II Kings 22:12 and 14; Jeremiah 26:22 and 36:12 as a Hebrew name.

From Hebrew literature it thus appears that the mouse was a vehicle used by the God of Israel to punish the Philistines and that it became a symbol of relief for the Philistines who made a golden image of this little creature. Additionally, the mouse was considered most unsacred by some elements of the ancient Hebrews, but seemingly sacred by others. This small furry rodent was also important enough that personal names became based on its name. Thus it can be seen that even though the mouse played a small part in Hebrew religious literature, it was an important part.

Because of the close connections between ancient Israel and ancient Egypt, one should expect to find some similar "mice" tales in the religious literature of Egypt and such is indeed the case. One interesting story of Egyptian mice appears in the second book of the *Histories* of Herodotus. Here Herodotus relates the account of Senacharib, the king of Assyria, brought a great army to fight against the Egyptians. Against such a strong army the Egyptian soldiers refused to fight, so the Egyptian king, Sethos, went into the temple of the god Ptah, and cried to the god about the peril which threatened them. During the prayer the king went to sleep and the god spoke to him in a dream telling him that he should not worry because the god "will send you champions." The king trusted the vision and with his few remaining troops he encamped on the borders of Egypt at Pelusium. As the Assyrians camped opposite them that night, a multitude of fieldmice swarmed over the Assyrian camp and devoured their quivers, their bows and the handles of their shields to such an extent that they fled the next day unarmed. After this miraculous event, there was placed in the temple of Ptah a stone statue of the Egyptian king with a mouse in his hand, and an inscription stating: "Look on me, and fear the gods."[6]

Another interesting "mouse" story coming from Egypt is connected with the saga of Set and Osiris. In this story Set managed to kill Osiris and then scattered his body all over the world. Osiris had a son named Horus, and Set wished to kill Horus also, lest he should become his enemy and the claimant of the throne of Osiris. As he attempted to do so, wise Thoth came out of heaven and gave warning unto Isis, the mother of Horus, and she fled with her child into the night. She took refuge in Buto, where she gave Horus into the keeping of Uazit, the

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[6] *Herodotus* II, 141.

virgin goddess of the city. Whenever Set came near, Uazit took the form of a mouse to escape him, and thus according to Egyptian tradition, the mouse became sacred to the goddess Uazit.[7]

The importance of the mouse in Egypt is further shown by the fact that Strabo includes it in a list of the animals which were worshipped in Egypt. According to this list, the mouse was worshipped by the Athribitae or dwellers in Crocodilipolis.[8]

From this discussion it can be seen that Egyptian religious traditions frequently deal with mice. One story shows how mice were used by a god to punish an enemy by destroying his weapons, just as the Hebrew god sent the mice to punish the Philistines by ravaging their land. Because of this the lowly mouse became exalted and was thought of as a holy object.

Neither is the mouse missing in Akkadian religious literature. It appears in the literature as the Sumerian ideogram PESv which is the equivalent of Akkadian hu-um-si-ru. Although this little creature is not included in any important mythological stories of ancient Mesopotamia, it does appear numerous times in the literature as a figure of speech in the form of a simile or metaphor. It also appears as a divine name δ Hu-mu-si-ru in reference to the god δ MAR.TU. There are likewise many masculine and feminine personal names which are formed from this word, just as is true in Hebrew literature.[9] These things

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[7] Donald A. Mackenzie, *Egyptian Myth and Legend*, London: The Gresham Publishing Co., p. 16.

[8] Strabo XVII, 40. It should also be noted that artist forms of the mouse also appear in numerous tombs in Egypt. Andrew Lang in his book *Custom and Myth* points out on page 113 that there is a green mouse containing the throne-name of Thotmes III on its base, and thus it would appear that the mouse was used as a substitute for the sacred scarab. The writer observed while going through the Egyptian section of the British Museum a painted steatite mouse with wooden movable lower jaw and tail, a glazed composition figure of a mouse, a bronze mouse sacred to Horus, and a bronze mouse with two winged disk and a flying vulture on its back. There are probably numerous other examples in the British Museum and other museums of this important little creature. Also there is a picture from Egypt in a book by Andre Lhate, *La Peinture Egyptienne* pl. 167, which depicts a mouse standing behind a lady who is in front of the god Osiris.

[9] I.J. Gelb, et al (eds.) *CAD: The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, Chicago: University of Chicago Press, 1956ff, vol. VI, p. 236. See also Wolfram von Soden, *Akkadisches Handworterbuch.* Weisbaden: Otto Harrassowitz, 1962, Lieferung 4, p. 355. It should also be mentioned that artistic representations of the mouse came from the excavations of ancient Mesopotamian cultures. E.D. Van Buren points out in his *The Fauna of Ancient Mesopotamia as Represented in Art* that among amulets or pendants from Kish there was a little mouse of white stone pierced with a hole for suspension. Also on the floor of the temple at Nozi were scattered pendants and beads and some of these were in the shape of mice. See page 26. The personal names include Hu-un-si-ri, Ha-am-zi-ru-um, Ha-ba-zi-ri, Ha-ba-si-ru, Hu-ma-zi-rum, Hu-mu-si-ru-um, Ha-ma-zi-ru-um, Ha-ba-si-ru, and Ha-ba-sir-tum.

indicate that the mouse was certainly no stranger to the literature and religion of ancient Mesopotamia.

In the Hittite literature of Anatolia, the writer has been able to find only one passage in which the mouse appears. However, in this text, which Albrecht Goetze calls the "Purification Ritual Engaging the Help of Protective Demons," the furry rodent plays a most important part.[10] This ritual consists of four parts with the first three running mainly parallel with one another except that they are addressed to different demons. The second part is relevant here, because a mouse appears in the ritual which is addressed to the demon Alauwaimis. The text reads as follows: "She wraps up a small piece of tin in the bowstring and attaches it to the sacrificers' right hands (and) feet. She takes it off them (again) and attaches it to a mouse (with the words): 'I have taken the evil off you and attached it to a mouse. Let this mouse carry it on a long journey to the high mountains, hills and valleys.' I shall give you a goat to eat!"[11] Later in this same text it states, "Another pure mouse they bring and he sends it before Tarpattassis."[12]

Just as the five golden mice were to carry off the evil plague which had befallen the Philistines, so here the Hittite writer conceives of the mouse as carrying off the evil of the ones participating in the ritual. Thus the mouse serves somewhat in the capacity as a scapegoat, as well as appearing to be a potential sacrifice to the god Tarpattassis.

Although thoughts of any connection between Greek mythology and Hebrew literature are generally considered anathanma, one finds the closest parallels to the biblical "mice" tales in Greek myths. One of these myths is told by Aelian as he tries to explain the origin of Apollo Smintheus. He points out that those who lived in Hamaxitus in the Troad worshipped Apollo and gave him the name Smintheus, the ancient Cretan word for mouse, because the mouse was sacred to them.[13] The reason behind this connection goes back to a tale which reports

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[10] James B. Pritchard, *Ancient Near Eastern Texts Relating to the Old Testament,* Princeton: Princeton University Press, 1955, p. 348. Here Goetze gives a translation of the second and fourth parts of this ritual.

[11] *Keilschifturkunden avs Boghazko*, Berlin: 1921ff, XXVII 67 obv. ii 34-42.

[12] *Ibid.*, XXVII 67 rev. iii 44-45.

[13] Strabo says that the word means mouse and thus Apollo Smintheus would be the "mouse god". (Strabo XIII, 64) Additional study by Mary H. Swindler in *Cretan Elements in the Cults and Ritual of Apollo* has shown that this is indeed the ancient Cretan word for mouse. See page 29. This of course agrees with the words of Strabo that the Teucrians, about which the story is told, were originally from Crete. Since the cult of Apollo Smintheus was supposed to have come out of Crete, it is interesting that Apollodoros (Bibliotheca III, 3f) tells the story that the son of Minos, the ancient king of Crete, and Posiphae, Glaucus, while still a child, was drowned by falling into a jar of honey as he was chasing a mouse. Willetts thinks that Glaucus may have laid Apollo Smintheus under a special obligation by dying while pursuing a mouse. (See R.F. Willetts, *Cretan Cults and Festivals,* p. 66.)

that mice came in tens of thousands and cut off before they ripened the crops of the Aeolians and Trojans, rendering the harvest barren for the sowers. Accordingly the god at Delphi said when they enquired of him, that they must sacrifice to Apollo Smintheus; they obeyed and freed themselves from the conspiracy of mice, and their wheat attained the normal harvest.[14] This story is of course very similar to the story of the Philistine mice who ravaged their land, but it is also the acts of devotion to the deity who sent the mice and the exalting of the mouse itself that brings relief from the trouble.

Aelian and Strabo both give another version about the origin of Apollo Smintheus, and they connect it with the Teucrian movement from the island of Crete to Asia Minor.[15] According to this story, when the Teucrians arrived in Asia Minor they asked Apollo to tell them of some place where it would be advantageous to found a city. The oracle then instructed them to "stay on the spot where the earth-born should attack them."[16] So they came to a place called Hamaxitus and pitched their camp, but a countless swarm of field mice came into their camp and gnawed through their shield-straps and ate through their bow-strings. They guessed that these were the earth-born referred to and besides, having no means of getting weapons of defense they settled in this spot and built a temple to Apollo Smintheus. Of course this story bears very close similarity to the earlier story told about the mice attacking the army of Senacharib.

Concerning the temple of Apollo Smintheus at Hamaxitus, several very interesting things have been recorded by the ancient Greek writers. Strabo states that mice swarmed around this temple and that they were regarded as sacred. He also noted that the image of Apollo is depicted with its foot upon a mouse.[17] Aelian adds that in the temple of Smintheus tame mice were kept and fed at public expense. Furthermore he

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[14] Aelian, *On Animals*, XII, 5.

[15] *Strabo* XIII, 48 and Aelian, *On Animals*, XII, 5. From what archaeologists can discover, it appears that the mythological story of the movement of the Teucrians is connected with a very large movement of peoples about 1200 B.C. which brought on the destruction of the Hittite Empire, the city of Ugarit, numerous other cities on the coast of Cyprus, Syria and Palestine and even came to the very borders of Egypt to fight a very big battle with Ramses III. This invasion of the "Sea Peoples" was repulsed by Egypt, and the invaders began to settle to the north of Egypt. Some settled in the Troad as the Teucrian myths portray while others settled in Palestine and later were called Philistines. It is also interesting that the Biblican tradition says that these Philistines came from Caphtor, usually associated with the island of Crete. Thus the Teucrians and Philistines were a part of the same movement of peoples and originated from the same land, and therefore thus one would expect that there should be some similarities between their traditions.

[16] *Strabo* XIII, 48.

[17] *Strabo* XIII, 48.

records that the mice had a nest beneath the altar and that by the tripod of Apollo there stood a mouse.[18]

Neither should one think that Apollo Smintheus was an unimportant god, because there is available evidence concerning numerous cult centers for this mouse deity. The earliest testimony is found in the Iliad where Apollo Smintheus is invoked by a priest at the cult centers of Chryse, Killa and Tendos.[19] Of course the chief center of worship was at Chryse near Hamaxitos. Apollo Smintheus was also honored in communities which had colonies in the Troad, as for example, in Lesbian Arisba, and Methymna, and at Magnesia. Likewise on the island of Ceos there seems to have been an important cult center of Apollo Smintheus. No record of his cult is preserved on the mainland except at Athens and Thespice.[20]

It is also interesting that the name of Smintheus is used as a geographical place name. In the neighborhood of Hamaxitus itself, there are two places called Sminthia; and there are others in the neighboring territory of Larisa. According to Strabo, there is a place called Sminthis in the territory of Parium, as also in Rhodes and in Lindus and in many other places.[21]

From this material on "Apollo the Mouse-God" it can clearly be seen that this was a very important god among the Greeks of Asia Minor and the islands of the Aegean Sea. Because of his importance, the mouse likewise enjoyed a place of fame among these people and occupied a a position of sacredness in the temple. The literature points out that the mouse was used as a tool of the deity and consequently became a symbol of destruction and at the same time a symbol of salvation or relief. The mouse was also important enough in Greece that towns were named after it.

As one looks back over all of these literary traditions, several interesting facts emerge. For one thing, the mouse becomes associated with religion among all the main cultures of the ancient world, and in most cases the function of the mouse was very similar. Except among the people of Mesopotamia, the mouse was a symbol of punishment and relief or salvation. Another point is that the mouse took a position of honor in the religious literature, except in one occasion in the Old

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[18] Aelian, *On Animals*, XII, 5. In Paoli's *Della Religione de' Gentili* there is a bas-relief with a mouse on the tripod of Apollo (page 9). Coins also used the design of the mouse on them. The Argives, according to Pollux, stamped the mouse on their coins (*Onomastica*, IX, 6, segm. 84). As there was a temple of Apollo Smintheus in Tenedos, one naturally hears of a mouse on the coins of the island. The people of Metapontum stamped their money with a mouse gnawing an ear of corn, while the people of Cumae employed the form of the mouse dormant. See Andrew Lang, Custom and Myth, p. 111.

[19] *Iliad* I, 39.

[20] Mary Hamilton Swindler, *Cretan Elements in the Cults and Ritual of Apollo.* Bryn Mawr: Bryn Mawr College, 1913, p. 32.

[21] *Strabo* XIII, 48.

Testament, and is usually connected with one specific god and his temple. Also in the Hebrew, Egyptian and Greek traditions, the mouse is a tool which is used by a deity to convey some message to a group of people. Another fact is that the bodily form of the mouse is usually associated with an important religious shrine. Finally, the mouse was important enough that gods, men and towns were frequently named after it.

Having seen the vast similarity between the "mice" tales of the ancient Hebrews, Egyptians, Akkadians, Hittites and Greeks, the writer has come to the conclusion that this similarity is no accident, but rather it shows that these tales were a part of the common literary tradition of the ancient Mediterranean world which were used in similar manner by all the participants in that world.

THE PROLETARIAN REVOLUTION AND THE INTERNATIONAL ENERGY CRISIS: A THIRD WORLD VIEW

by DANIEL A. OFFIONG*

Briefly, this essay aims to show how Lenin and Kwame Nkrumah have explained why the Marxian proletarian revolution has not materialized, and to examine the feasibility of such a revolution in the light of the current international energy crisis, the pinch of which has already been greatly felt by the capitalist nations. According to Marx, the workers' own labor power was to decline in value as the workers' skills became replaced by machines. Workers were to become "increasingly interchangeable and expendable" as "capitalists continued to revolutionize productive forces."[1] The result was to be a rising unemployment forcing wages below subsistence levels until the point of revolutionary explosion was reached. But it became increasingly clear that instead of the workers of Western Europe becoming poorer, they were becoming richer. This prompted Lenin to try to find out why this was so.

The answer lay in imperialism. Lenin argued that the founding of the British Empire, which enabled it to exploit the natural resources of the colonized peoples, kept the British workers away from abject penury and thus prevented a proletarian revolution. As Mazrui has pointed out, Benjamin Disraeli's concept of the "two nations" of Britain was, in a sense, Marxian.[2] The British people have polarized into two potentially antagonistic "nations within the nation," that is, the poor against the rich. Lenin then wanted to know what prevented an open conflict. His answer was found in British imperial expansion. In support of his thesis, Lenin quoted Cecil Rhodes who in 1895 had said:

> ... In order to save the 40,000,000 inhabitants of the United Kingdom from a bloody civil war, we colonial statesmen must acquire new lands to settle the surplus population, to provide new markets for the goods produced in the factories and mines. The Empire, as I have always said, is a bread and butter ques-

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I am thankful to Henry DuFour for reading an earlier draft of this essay and for his useful comments.

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[1] C.H. Anderson, *Toward a New Sociology: A Critical View* (Homewood: The Dorsey Press, 1971), p. 70.

[2] Ali A. Mazrui, "Borrowed Theory and Original Practice in African Politics," in Herbert J. Spiro (ed.), *Patterns of African Development: Five Comparisons* (Englewood Cliff, N.J.: Prentice-Hall, 1966), p. 111.

tion. If you want to avoid war, you must become imperialists.[3]

The implication of this was that the proletarian revolution would come once the British empire disintegrated. The question in the 1960's was whether or not the revolution was imminent since the British Empire was disintegrating—in the sense that the exploited colonies were becoming independent. It was at this juncture that Nkrumah suggested an explanation as to why the capitalist nations would not collapse through a proletarian revolution. Nkrumah found his explanation in neo-colonialism—the exploitation of one country by another country without actually ruling it, or in the words of Green and Seidman, a situation stemming from "false decolonization," that is, "the preservation of the basic relationship of Western dominance" and the former colonies' "dependence by other means, after the transfer of formal political power."[4] It is neo-colonialism that stands in the way of the proletarian revolution because it still enables the metropolitan countries to exploit these so-called independent countries just as formal colonial imperialism did. In the words of Nkrumah:

> Marx had argued that the development of capitalism would produce a crisis within each individual capitalist State. The gap between the 'haves' and the 'have nots' would widen to a point where a conflict was inevitable and that it would be the capitalists who would be defeated. The basis of his argument is not invalidated by the fact that the conflict, which he had predicted as a national one, did not take place on a national scale but has been transferred instead to the world stage. World capitalism has postponed its crisis but only at the cost of transforming it into an international crisis. The danger is now not civil war within individual States provoked by intolerable conditions within those States, but international war provoked ultimately by the misery of the majority of mankind who daily grow poorer and poorer. When Africa becomes economically free and politically united, the metropolis will come face to face with their own working class in their own countries, and a new struggle will arise within which the liquidation and collapse of imperialism will be complete.[5]

According to Nkrumah, therefore, capitalism has divided the world into two opposing camps—the haves and the have nots—and as the wealthy nations become wealthier the poor nations become poorer. Hence the proletarian revolution if and when it comes is going to be international in scope with the wealthy and poor nations taking opposite

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[3] V.I. Lenin, *Selected Works in One Volume* (New York: International Publishers, 1971), p. 225.

[4] Reginald H. Green and Ann Seidman, *Unity or Poverty: The Economics of Pan Africanism* (Baltimore: Penguin Books, 1968), p. 14.

[5] Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism* (New York: International Publishers, 1966), pp. 255-256.

sides.

Interestingly enough, what we have seen in the last few years is the beginning of solidarity among the largest oil producing countries to demand better prices for their crude oil. Not only have they demanded better prices, but they have also become partners in the oil enterprise and, in some extreme cases, have nationalized foreign oil companies. However, until the Arabs decided to use their oil as a political weapon against their "enemies," it could not be conceived that a few poor nations, as an NBC news commentator recently commented, could hold the economies of the wealthy and powerful nations for ransom. It was very surprising that the Arab nations so balkanized by domestic parochialisms and foreign interests could demonstrate such a show of unity and solidarity, even though the U.S. has said that it received Arab oil despite the embargo. However, the amount was not what the U.S. normally received. The Arab nations have suddenly emerged as an important power bloc, forcing the economically, politically, and militarily powerful nations to panic. So aroused by the new solidarity and power bloc of the Arab oil producing nations has been the United States that she spearheaded the moves to bring about a disengagement of the Arab and Israeli forces in order to encourage the Arabs to resume oil shipment to the U.S. Oil as a political weapon has forced the U.S. to modify its policies towards the Arabs; at least this is what the Arabs themselves have openly stated. The U.S. has been so frightened by the new solidarity that it brought the oil consuming nations together to form a united front aginst the oil producing nations. Although the thirteen nations that met in Washington this February issued a disclaimer that theirs was not a confrontation, the oil producing nations have not believed them. Some Latin American oil producing countries have been reported to say that they might employ their oil as a political weapon if it ever became necessary. Now that the Arabs have proved the effectiveness of oil as a political weapon, other nations might like to try it whenever they consider it expedient. The question is then can it be said that the international revolution that Nkrumah predicted several years ago is about to materialize?

Over the last several months we have seen a growing discord among the NATO powers. Suddenly, the pro-Israel European powers have been forced to leave the U.S. alone; apparently, the only ally that the U.S. has as far as the Middle East issue goes, is Portugal that depends very heavily on the U.S. for its moral, political and material support in her colonial wars in Africa. We have seen Japan's Prime Minister rushed from a sick bed in a hospital to attend an urgent Cabinet meeting in which they frantically changed their foreign policy in favor of the Arabs. The U.S. while working diplomatically both openly and behind the screen to get the oil embargo lifted, has stigmatized it as "blackmail." It is difficult to define what constitutes blackmail, and perhaps the use of the World Bank, foreign aid programs and political influence to reward friendly countries could be interpreted as blackmail by those nations adversely affected. While the impact of the oil embargo in the

U.S. is not as biting as it has been in Europe and Japan—largely because the U.S. derives most of its oil from domestic sources, and also because its main suppliers like Canada, Nigeria, and South American countries are still shipping their oil as usual—the effect nevertheless has been felt enough. But is the revolution predicted by Nkrumah finally here?

There is little question that the poor nations would be the losers if such were the case and particularly if open conflict were to break out, and assuming that Russia and China would not side with the poor nations. But destroying an enemy's economic power could also be seen as part of the strategy. Looking at it from this perspective, one could now say that the international revolution is gathering momentum. But this would be tantamount to reading too much into what apparently is not of such a scope. One has to be very careful in assessing the international impact of the energy crisis in light of the charges that the oil companies contrived it in order to make windfall profits. It becomes extremely difficult, if not impossible, to say what fraction of the crisis is due to the oil embargo and which is due to the manipulations of the oil companies (if the accusations are true). Another difficulty is that the U.S. has been accused of blowing the crisis out of proportions in order to use it as a means for reasserting its leadership role of Western Europe. But this accusation would be hardest to prove.

However, if all the oil producing nations were to stop selling their resources to the capitalist nations, it is conceivable that both Japan and France would be the first to collapse economically because of their dependency on Arab oil. But since the governments could point to the oil producing nations as the villain, it seems most unlikely that one could expect a proletarian revolution such as Marx had predicted. Since it is unlikely that the capitalist nations would be willing to wage war against the poor nations for fear that it might culminate in the annihilation of mankind, should Russia join in on the side of the poor nations, the kind of international revolution predicted by Nkrumah could not be expected. There is no question but that the U.S. would feel the energy pinch even worse than now and thermostats would be lowered even more than they are. Thousands more would be out of work. As President Nixon has stated a number of times, the crisis could turn out to be a blessing in disguise; a substitute source of energy may be discovered. But it is the opinion of this writer that worse conditions might be experienced before such a discovery could be made.

Assuming that the poor nations should decide to make it an all out war against the industrial powers by cutting off all of their natural resources of critical importance, there could result a critical economic crisis, which could seriously affect the military capacity of the capitalist nations. But such a war could boomerang since the poor countries that produce the raw materials still depend quite largely on western technology for their industrialization. Russia, which is as imperialistic and capitalistic as any western country, has been claiming to be on the side of the oppressed peoples. Presumably the poor nations would turn to her for their needs. But Russia probably would not have enough mar-

ket for these raw materials, nor could it provide all of the technology so direly needed for their industrialization process. Many poor countries in the world receive large volumes of food from the western world but particularly from the U.S. Such an all out war could lead to the starvation of many people. In the final analysis it could turn out to be a war in which no one could expect to be the victor. This would mean an almost insurmountable international economic anarchy as the current international monetary system could collapse. However, since most people in the poor nations have never been exposed to the many comforts that peoples in the industrialized nations have been enjoying for years now, the former would not be denied much and would presumably absorb the resultant sufferings with equanimity.

But the confrontation such as we have depicted above seems remote. Let us examine why such a conclusion would be made. Joseph Chamberlain in 1898, while Secretary for the Colonies (1895-1903), made an impassioned plea for imperialism. He said:

> . . . I am convinced that it is a necessity as well as a duty for us to uphold the dominion and empire which we now possess . . . I would never lose the hold which we now have over our great Indian dependence . . . by far the greatest and most valuable of all the customers we have or ever shall have in this country. For the same reasons I approve of the continued occupation of Egypt, and for the same reasons I have urged upon this government, and upon previous governments, the necessity for using every legitimate opportunity to extend our influence and control in that great African continent which is now being opened up to civilization and to commerce; and lastly, it is for the same reasons that I hold our navy should be strengthened . . . Until its supremacy is so assured that we cannot be shaken in any of the possessions which we hold or may hold herafter.
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> Believe me, if any one of the places to which I have referred any change took place which deprived us that control and influence of which I have been speaking, the first to suffer would be the working men of this country. Then, indeed, we should see a distress which would not be temporary, but which would be chronic, and we should find England was entirely unable to support the enormous population which is now maintained by the aid of her foreign trade. If the working men of this country understand their own interests, they will never lend any countenance to the doctrines of those politicians who never lose an opportunity of pouring contempt and abuse upon the brave Englishmen, who even at this moment, in all parts of the world are carving out new dominions for Britain, and are opening up fresh markets for British commerce and laying out fresh fields for British labor . . .[6]

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[6] Reprinted in "European Civilization: Students Manual," prepared by SSCSC, University High School, Urbana, Illinois, 1967.

There seems to be little doubt that what Chamberlain predicted some 86 years ago is true today. Britain and France have devalued their currencies several times since the collapse of their empires in Africa. Britain knows that if Rhodesia and South Africa were to have majority rule the white supremacists would flee those places for fear that the natives whom they have maltreated for centuries now might want to pay them back in their own coin. It is certain that most of them would flee to Britain as did Asians in Uganda. The economic impact of such an exodus would be catastrophic. The capitalist nations are aware of their dependency on the poor nations for cheap supplies of crucial natural resources; they also know that these poor nations remain good markets for their finished products, particularly for their obsolete military hardware—most of the so-called foreign aid consists of this. The industrial nations know the devastating blow that would be dealt their economies and military capacities if those vital resources stopped flowing in, although they will not openly acknowledge this for fear that the nations producing such vital raw materials might exploit it to their advantage. Where the exploited nations are aware of the vitality of their resources and demand more money, the threat from the industrial powers is always that such a material will be synthesized in the laboratory. But we know that every raw material can be synthesized, at least for now. Because the capitalist are aware of the disaster that could accompany the loss of their resources, they have not hesitated to employ everything possible to preserve the status quo. This is demonstrated by the kind of arrangements that the former colonial powers made with their African colonies just before independence was granted. Let us briefly elaborate on this point.

As Dr. Nkrumah once observed: "The greatest danger at present facing Africa is neo-colonialism and its major instrument, balkanization."[7] The political frontiers of most of the modern African States were drawn by the imperial powers in the nineteenth century during the first scramble for Africa,

> without reference to geographical, ethnic, economic or sociological realities. They reflect little more than the extent to which the colonizing powers succeeded in carving empires out of coastal areas and extending them into the interior of the continent. Africa today, split up into over forty political units, is balkanized indeed.[8]

This situation is quite evident in West Africa where France and Britain pursued a policy of breaking up the region into many "pocket hankerchief" states as the nationalist movements gathered momentum. With the possible exception of Nigeria, none of the West African States is large enough to be economically viable. This makes their dependence

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[7] Kwame Nkrumah, *Africa Must Unite* (New York: International Publishers, 1970), p. 173.

[8] Green and Seidman, p. 34.

on their former colonial masters even greater and also makes them vulnerable to the exploitation of the big and powerful capitalist companies.

As colonial territories, France administered their sub-Saharan colonies as two large entities. But on the eve of independence it broke them up into tiny states in spite of opposition by some African leaders. As Green and Seidman have noted:

> In transferring authority to African political groupings, they consistently built up the territorial bodies and reduced the influence of the federal *grands conseils*. At the same time politicians favouring single territorial states were backed in disputes against those such as Bartolemy Boganda of the Central African Republic and Leopold Senghor of Senegal who sought to preserve the federations in order to give the independent states greater bargaining power with France.[9]

The British had regionalism as a policy. Hence they broke up Nigeria into three regions with one region being more than two-thirds the size of the other two put together. This was to ensure that the North, least developed of all the other regions and fearful of being dominated by the better developed ones, would take over power at independence. It did succeed because of the so-called parliamentary democracy in which the size of population determines the number of elected officials. The imperialists did not hestiate to do any thing that would insure their continued dominance in these colonies long after they had left. In the words of Basil Davidson:

> For what the colonial Powers thought wise and necessary was the formation and promotion to power of 'leading elites' or 'middle class' (those whom the French have so revealingly called *interlocuteurs valables*—'negotiators worth talking to'): groups of men who would ensure that post-colonial government should be 'moderate and responsible'—should be that is, a reflection of colonial government. And it is, here, in no small part, that the seat of the trouble has lain.[10]

Through these internal collaborators the former colonial powers and their allies, like the U.S. and West Germany, are able to continue their exploitation of these so-called independent states. Such leaders as Nkrumah who refused to cooperate with the imperialists were styled sub-Saharan Hitlers by the western press, the so-called objective writers, and their leaders. On the other hand people like Houphouet-Boigny of Ivory Coast, one of the greatest political opportunists of all times, have been hailed by the capitalists as outstanding African leaders because of their submission to western tutlage.

The NATO powers have carved out a large section, and the richest portion, of sub-Saharan Africa and placed it under the tutlage of white

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[9] *Ibid.*, pp. 34-35.

[10] Basil Davidson, *Which Way Africa* (Baltimore: Penguin Books, 1967), p. 131.

supremacists who are a minority. To make sure that the majority who happen to be blacks will never break away from their external servitude, South Africa, Rhodesia, and Portugal are armed to the teeth. But most of the support comes from the U.S. The recent Azores agreement, and the training of Portuguese military men are designed to enable Portugal to continue its colonial wars in Africa; the decision by the U.S. in 1971 to ignore the U.N. sanctions against Rhodesia and to import chrome, which reportedly was not in short supply,[11] was an attempt to make sure that that illegal regime did not collapse economically; the agreement between the U.S. and the white supremacist regime of South Africa in which the latter was to resume supplying gold to the International Monetary Fund, was an attempt to help South Africa out of a critical exchange reserve crisis. All these are designed to maintain the status quo in order to insure the continuous flow of raw materials from these places. With the help of the NATO powers (according to leaders of the South African regime), ammunition factories have been constructed, napalm is produced, and planes are manufactured, thereby making South Africa a military power.

The powerful nations know that they must unite in order to succeed in their control of world resources. Apart from military cooperation they also cooperate monetarily. In the words of Nkrumah:

> The principle of mutual inter-imperialist assistance whereby American, British, French and West Germany monopoly capital extends joint control over the wealth of the non-liberated zones of Africa, Latin America and Asia, finds concrete expression in the formation of interlocked international financial institutions and bodies of credit.[12]

Among these financial institutions are the International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD), and International Development Association (IDA).

In the Middle East the industrial nations have very strong economic, political and military powers. Outside of Israel which depends enormously (militarily, economically, and otherwise) on the U.S., several other countries in this area depend very much on arm shipments from the U.S. to stem the revolutionary forces within their own states. On the other hand, the U.S. needs the oil so vital to her economy. Hence a sort of mutual dependence is established. Despite the ostensible unity by the Arabs, the oil continues to slip through the embargo, which demonstrates the influence that the U.S. has in this area of the world. On the other hand, cooperation is not total; still, the kind of confrontation we have discussed above is most unlikely.

In Latin America, the U.S. has tremendous economic, military, and political powers. And the Monroe Doctrine is still operative. Just

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[11] See *New York Times*, May 31, 1972.

[12] Kwame Nkrumah, *Handbook of Revolutionary Warfare* (New York: International Publishers, 1968), p. 7.

as it is practiced by other European powers (including Russia), the U.S. uses its political and economic powers to reward those friendly countries while antagonistic or non-cooperative nations are most likely to face an invisible economic blockade that inevitably culminates in their collapse—except in the case of Cuba, which is sustained by Russia at an unbelievable cost.

In the final analysis, while the oil crisis (if it is real) may cause some hardships in the industrial nations, it is not enough to indicate the collapse of these nations. But it nevertheless shows that the poor nations when united can effect changes in the international alliances. The powerful nations know that they need crucial natural resources from the poor nations and are willing to do anything to keep things the way they are; and they appear well entrenched. Consequently, Nkrumah's world revolution must be postponed indefinitely.

ON THE PROBLEM OF HUMAN PROBLEMS

by JAMES B. KLEE*

One of the major achievements of Western Man has been science, his carefully won understanding of the world especially in its material aspects. On hindsight the knowledge so arduously won seems now with relative ease to have been convertible into the practical advantages of modern technology at least where technology was not itself an independent growth. This has not only made living more comfortable, less dangerous, but has given each individual a longer life expectancy and the opportunity of richer life itself. Few now fail to read, to hear music, to see a world visually enriched by the arts if only that of movie, pin-up, or calendar. The gains have been fairly general. Statistics even show relatively more people attending church and temple than ever before. Perhaps any criticism comes more from the new ability to consciously afford complaint than from a dire necessity. And yet there is a touch of depression, of anxiety, of ill feeling about it all. The very success of science and technology seems to have touched off a concern for human values once again as if the human being was somehow threatened with inundation by his own knowledge and skills.

Part of the troubled feeling seems to come from the ease with which the insights and techniques of modern man are changed into immediate use and resultant pay-offs. To those not directly concerned, and who know better, the models created by the scientists seem to need only the addition of "wheels" to produce the car, the plane, the dynamo, the entire structure of industry. Much more is needed of course, but it still seems easy from outside the process as we look back.

One does not notice the failures. "I can have the music *I want* when *I want* it," the book, the painting, the food. My expectations change, become more demanding, more immediate. What then is more tempting than to look forward towards resolving human problems using the same tools or at least methods, well in principle anyway.

But if you understand your mother, have a model of her, and add wheels, does "she become a bus"? Is there an emergent aspect in dealing with human problems not ordinarily emphasized in the popular picture of science? Is this emergent problem in basic science or in the technological application to human affairs? Or in both? I cannot pretend to answer these questions. I will feel lucky if they can be shown to make some sense as problems.

I have a feeling that in some fundamental and primitive sense science and technology are not in their origins in the human mind too different. If I may steal from Leo Bronstein's excellent lecture on Art and Religion the important thing is the *and*. The one without the other is really

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unthinkable. Science is absolutely necessary for formulation of the hypothesis to test or apply, but we would not be beyond the most blatant magic if we did not have the skilled means to test our observations. In a way, there is a relationship between science and technique not unlike that between experience and response with a feedback from the results of the skilled response which influences the next experience which in turn modifies the next act; and this sequence started when life began. If the originating experience is noxious, an adequate understanding of its source and nature should help in its removal or alleviation. One drops the too close burning match to use a very primitive example. Or, if the present experience is pleasant, one seeks to amplify to satiation or if possible to prepare for a repetition. In an evolutionary sense the most primitive forms of approach and avoidance contain the *and* of science *and* technology. And yet, this is not entirely an analogy because the child, the adolescent, the naive, the ignorant, the colonial, the anxious and alarmed do not make much of the distinction but live the *and* very strongly. The public outcry in 1958 even by the "enlightened" to Sputnik I was an excellent demonstration of the wholeness of experience and act, knowledge and skill, science and technology.

In view of this lack of distinction in the "public mind" (to abbreviate the above list) one even wonders if science could be reinvented today. And one wonders if this relative primitivation, a regression in the values that led to the discovery of science itself, has especially obscured those values which we formerly held towards *other* human beings including those through which we regarded ourselves. One wonders if even though the social organism of science is now separate from the social organism of technology the individual scientist and technologist might be less different "psychologically," that is each might be more "primitive" in himself. The Arab and Jew, the frontiersman and savage, the white and the black, the Colon and Algerian are in the face to face encounter very similar psychologically. They are usually reduced to the lowest common denominator. They lose their greatest differential value. They are now forced to be a smaller whole by their very separateness instead of drawing upon the richness of their former union.

One senses a growing childishness in the world—a loss of perspective and patience. And not just among the youth, who seem somehow to be staying young longer, but also among adults. Or maybe our relative sense of success merely enables us to face more squarely the deficiencies we've always had so that the immaturity is more apparent. Possibly it's a little of both. One hopes it is more the latter. Experiments on animals have shown that successful animals adjust to change more effectively despite the frustration contained in the transition between the failure of old habits and the development of new ones than do animals that have failed all along and who when offered the opporunities of success may not be able to take advantage of it. Yet failure may contribute to knowledge also in a positive sense and as we all ultimately fail as individuals, we die, this aspect may have to be valued too. One might call the sum wisdom. Here I feel with Gabriel Marcel there may have been

a decline in wisdom as we seem less to fail.

Some say that the present man is becoming a conformist. Maybe so. But perhaps this is not his intention. Perhaps conformity is a result of what might be more correctly identified as a narrowed image of man, shrunken by his own success with the material world. The ideals of purity, respectability, and power of domination he gained so deservedly in his mastery of the physical, he is now tempted to apply to himself or at least to others as he continues. I frequently get a weird feeling of petulant spoiled bratness from the successful scientist. Watching from afar some of our major "geniuses," on television especially, one senses an inordinately successful child prodigy who never quite got beyond twelve as he delighted in his collecting of stamps, coins, facts, microbes, electrons, numbers, words, etc. He seems never to have stopped or have been stopped and if he were, one might expect the initial reaction to be a pout. Of course Western Man shows this even more. But the shock comes when we find the scientist doing it, too. We excuse so much in the name of science. It is as if the frame of reference of the recipients of the benefits of science has reverted to the level of magic, white or black. The *and* has shrunk to the stimulus response level of action and reaction. The idea of the challenge with its implications of possible failure has been replaced by the sign of hygienic goodness. In brief, man falls again. Instead of sticking to the tree of knowledge, he has tasted of the tree of the knowledge of good and evil.

What I'm trying to say is that despite the patience which scientific method requires and attempts to teach, the success of science may achieve a negative sum when applied to the human as the object of science or of technology.

In a historical sense some of the roots of the hopes and ideals of the scientists as men came from the religion based civilization which gave science house room as a difficult and often unwelcome guest. And yet science was "tolerated" where it was thought of as potentially useful, where its earliest fruits were found good and were exploited where possible. Farrington's list of inventions and discoveries during the so-called Dark Ages is most impressive and did much to lay the groundwork for the flowering of science in Italy, France, and England centuries later. But as the individual scientist took the adventurous step with one leg, the other foot was still firmly grounded in the ideals and hopes of the Judaeo-Christian-Greek tradition. His was not a problem basically of what to do but of how best to accomplish his hopes. The Church was criticized not for its ideals so much as for its failure to live up to them. These the enlightened man hoped to achieve if only he knew enough or had the proper skills. The cosmologies were replaced in this enterprise more than were the hopes that guided the attack. A tremendous hope of here and now or at least of the soon, began to grow. But this did not change the basic ends towards which the attack was directed. Yet today one feels that the science foot is firmly planted and the foot formerly rooted in religion-generated hopes is beginning to stir. Early forms of the next step, the pseudo science of the pure race of German

Nazism, Jewish Zionism, the Japanese Shintoism of the "double patriots," the Utopianism of Russian Communism, the irrelevant autonomous, psychological, individualism of France and of the United States (pseudo-democracy), are all signs of the ideological adventurisms to which science *as science* can say nothing and for which the scientist has little or no preparation in his role as a human being. Science has won the house, the flies captured the fly paper. Now what? What are the new goals? Could we by some neoromantic miracle restore the deep-rooted hopes of the Judaic-Christian era? One sees their real remnants, stoning buses on the Sabbath, holy rolling in Yankee Stadium, giving the true faith to the heathen Hindu. One realizes immediately these examples are too small, too conceited, too restrictive to serve as our image for all men. What then?

Well, one solution has been to re-double the scientific-technological effort only now with the human as object of study and the subject of the manufacturing response. Psychology here has been a very willing tool. When a Jewish girl in Israel declared to her parents her love of an Arab neighbor, the first thing the parents did was send her to a psychiatrist. That is the *normal* or *typical* function of psychology for us even though a few old type idealists might object to this as a misuse. But if they in turn would have preferred to send the parents to the psychiatrist, would the situation be any different? In either case, hasn't the major effort been to treat the "other" as raw material for reprocessing towards some Utopian ideal? This is what was meant by the possibility that a new dimension emerges in our shift of scientific method and technology from the inanimate to the animate world. Why not treat the human as raw material or reprocessing towards an end product such as an ideal-Utopia especially if it can be designed by recognized experts? And as B.F. Skinner points out inasmuch as we already have an inefficient design for living (our culture) why not put the psychological and sociological architects to work on it to make a really good one? Why leave it to happenstance? But is that what we were doing? Or was there also a reconigition of something else called variously, personality, being, freedom, or history which gave to each individual a partial responsibility for his own destiny, his own life, his own death? Does this not make each person more than raw material for the experts' Utopia? The wheels added to the model of the mother might make a bus, but one puts the wheels on the model, not on ma. On ma—she skates funny. The models one does meet, exteriors by Mr. John and Miss Arden, interiors by Rexall and Dr. Freud, leave a great deal to be desired. They lack "humanity" in some awful way. They show that peculiar hollowness of so many suburban children to whom all the "right things" were done.

This is not to deny that the human is not also a physical object. That shot from a cannon he is not too different from a wheatie or a bullet—softer, larger than some, smaller than others. Disintegrated in an explosion one might expect some similar range of distribution of particles to that of a small motor bike or a calf. The problem here is not different. It is the different problem of the unique, historical being

which usually was of no concern to the older sciences that bothers me. In fact, in order to achieve "objectivity" science did its best to get rid of the old "subjectivities" which seemed merely "superstitions." It is the intentionally unrepetitive aspect that is once again the newer concern. And this is so despite the great similarities from person to person, and from hour to hour in the same person, similarities that so often seem merely the repetition of identities. Yet despite the endlessly disappointing similarity of children, each is a new world afresh. Each is a new hope not only in himself but to others as well. It is this existential problem of each person at each hour that emerges. And for this our preparations are unpreparing because they rob us of the moment's uniqueness, of its creative possibilities. This is the emergent issue the life sciences must face in *addition* to all the others. And here the old virtues may have to be re-discovered or at least re-invented. Because here at least a temporal separation between science and technology becomes essential. But now not because as it used to be difficult to connect wish and act, but because it has become once again too easy. Because here one's action upon one's experience becomes very complicated, and often not possible at all. Who can be made to love another?

At best one comes into a relationship with the person as the object of study as does a parent to child, teacher to pupil, a gardener to plant, or a farmer to crop or livestock. One may nourish, fertilize, aid, shelter, give to the other but one cannot replace in any way this *other.* Instead one may love or hate, cherish or maim, fear of kill the other, but the relation is always to an "other". One must not, at least not wisely, relate as to so many pounds of raw material with no essential being not ultimately subject to alchemical changes. One need only think of the Nazi soap factories here. One may express limited opinions vigorously, in fact must do so, but as opinions they are a few among the many and you know they fall on deafened ears of others. No longer are cause and effect very strongly manifest in the parent-child, farmer-crop, doctor-patient relationship. Triggers, signs, and decisions are the rule, not action and reaction. The relationship has become a cybernetic one. And the fabulous complexity and varieties of being one encounters! No wonder Miss Peaches' "model" pupils detest and are frightened by Arthur's collection of variegated weeds. It would be so nice if it were all to be pure, rational, simple, organized, and inter-convertible like a periodic chart. The inter-changeable Jew, Christian, Vitamin, Ford, Scientist, American, Sophomore, Professor, are ideals we, as administrators, wish for the other and even ourselves on occasions. But these interchangeabilities may merely reflect the desperations of other eras. And the desperations are not to be taken lightly. So the surgeon is working steadily towards banks or depots of interchangeable hearts, arteries, bones, kidneys and eyes and we are grateful and should be. It isn't that these are not "real" problems, they are and often a matter of life and death. It's that this other problem of the now, the unique, the being, the historically present, is here, too. And this we must face *also* if not instead. The *and* has an additional dimension, that of human freedom.

BLACK POVERTY: A DIFFERENCE IN DEGREE IN THE SOUTH

by JAMES R. O'MALLEY*

Poverty in the southeastern United States, when analyzed from the viewpoint of percentage families poor in 1970, depicts three areas with extreme economic conditions (Figure 1). Several other areas exist, but are confined to much smaller areal extents. The three extensive concentrations are located in: (1) the Mississippi River flood plain occupying parts of Tennessee, Mississippi, Arkansas, and Louisiana; (2) the south central sections of Alabama and Mississippi; and (3) portions of the eastern third of Kentucky and northeastern Tennessee. The latter two of the three areas are similar in their degree of poverty, but here the similarity ends. Economic and social characteristics of the population are quite diverse. The area of extreme poverty located in south central Alabama and east central Mississippi is formulated around an economic base of agriculture. The area encompasses much of the "Black Belt" area of Alabama and Mississippi. However, the eastern third of the area lies outside this belt which in previous decades has been known for its cotton complex. In recent years cotton production has declined sharply and agriculture has shifted to soybeans and beef. While the crops and activities have changed, the area is still predominately agriculturally oriented. Accompanying agricultural orientation has been a large percentage of Blacks with all of the counties having 30 percent or more black population. This black population first served as slaves, then as "hired hands" and sharecroppers and today remain as vestiges of a changing agricultural scene. The area in eastern Kentucky and Tennessee has approximately the same severity of poverty as the area in central Alabama and eastern Mississippi. The Kentucky-Tennessee area, however, is not primarily agricultural, but has mining as its major economic activity. The racial composition of the area is very different with Black population in the Kentucky counties ranges from .6 to 6 percent of the total.[1] Therefore, the similarity of poverty coupled with the diversity of racial and economic activity produces a unique situation in which to test the following hypothesis: Blacks are significantly higher in the economic structure in an area with relatively low percentage Black population.

Study Area

Two of the three large areas of extensive poverty were selected in

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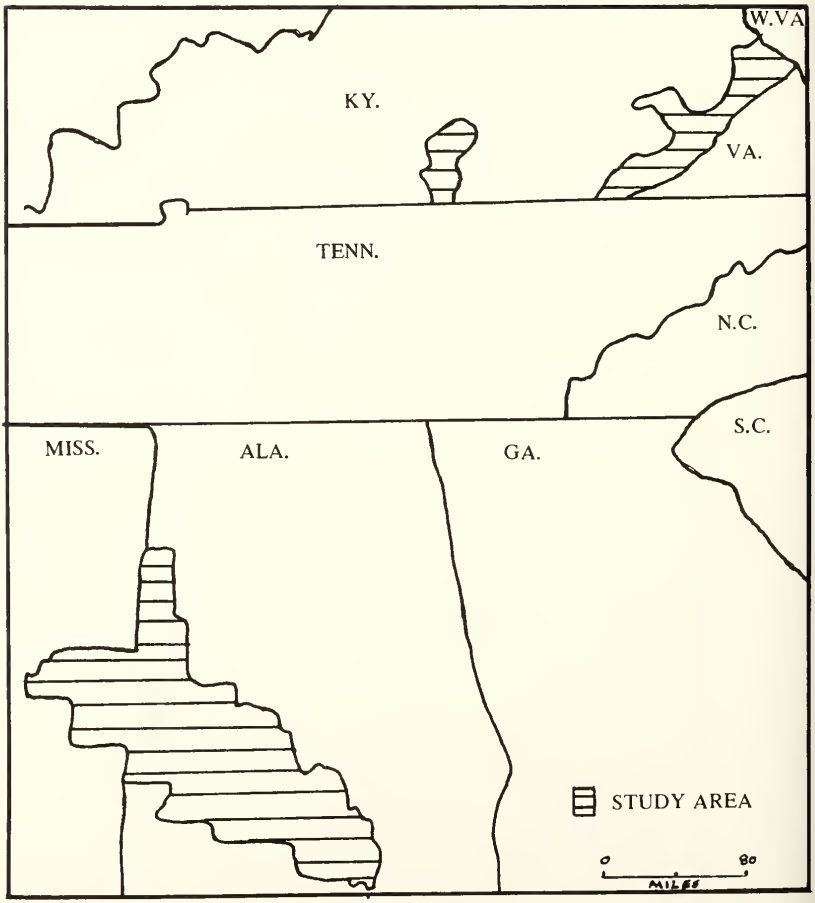
[1] U.S. Department of Commerce, Bureau of the Census, *General Social and Economic Characteristics, 1970, Kentucky, No. 19,* Table 128, p. 418.

which to test the hypothesis. (Figure 2). The "Black Belt" area of Alabama and Mississippi and the coal mining area of eastern Kentucky were chosen due to contrasting racial and economic make-up. Within the two large areas twenty-two counties were selected to serve as areas of more detailed analysis. The counties were chosen using two criteria: (1) Both areas (seven counties in Kentucky and fifteen in Alabama and Mississippi) have poverty levels falling in the upper quartile of percentage poor families: and (2) Each of the areas had a large enough Black population to be reported by the U.S. Census of Population. The Kentucky area had a significantly lower percentage of Black population than did the Alabama-Mississippi area (3 percent and 53 percent respectively). The minimum number of 400 Blacks in a county before census tabulation caused a contraction of the Kentucky study area and selection of only those seven counties which had at least 400 Blacks.

Figure 2



STUDY AREA

Methods

Three indicators of poverty were chosen for analysis of relative poverty of Blacks in each of the two areas: (1) Percentage of Black families poor; (2) Percentage of Black persons poor and (3) Median income of Black families. Selection of these variables was based upon research concerning poverty by individuals such as Morrill and Wohlenberg[2] and by the inclusion of these variables in the U.S. Population Census sections dealing with poverty in the United States.[3]

Each of the variables was mapped by county and a visual comparison was made. Area comparisons utilizing averages of the selected variables were calculated to give general levels of poverty for Blacks in each of the study areas. Tabular and cartographic comparisons of percentage Black families poor to all families poor were made for each study area. Similar comparisons of percentage Black persons poor to percentage of all people poor were also made for the two areas. By comparing mapped and tabular data, the poverty of Blacks in both areas was ascertained and inferences made concerning the relative economic state of Blacks in the two areas.

Analysis

Black poverty in the two study areas depicts various relationships dependent upon the variables under analysis. Table 1 shows area averages for the selected variables of percent Black families poor and percent black persons poor compared to averages for all families poor and all persons poor. Approximately 54 percent of all black families in the Kentucky area are poor, while more than 66 percent of the Black families in the Alabama-Mississippi area are under the poverty level. A differential of 12 percent exists between the two areas. However, only a 5 percent differential exists between all families poor for the study areas. Figure 3 adds additional insight as to why the difference between percent Black families poor in Alabama-Mississippi and percent Black families poor in Kentucky is not larger. Adair County in the western portion of the Kentucky area is abnormally higher than any of the counties in the Alabama-Mississippi area. Removal of this anomaly increases the average percentage of Black families poor in the Kentucky area significantly. Figure 4 portrays the relationship between all families poor in both study areas. A comparison of Figures 3 and 4 illustrates that the difference between percent Black families poor and percent all families poor in Kentucky is not as large as the difference between percent Black families poor and percent all families poor in the Alabama-Mississippi area. Such a relationship is supported by Table 2 which illustrates that 18 percentage points separate poor

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[2] Richard L. Morrill and Ernest H. Wohlenberg, *The Geography of Poverty in the United States*, (McGraw-Hill Book Co., New York, 1971), pp. 99-100.

[3] U.S. Department of Commerce, Bureau of the Census, *General Social and Economic Characteristics*, 1970, Nos. 26, and 1, Tables 128, 124, and 125.

Black families and all families poor in Kentucky, while 28.8 percentage points separate the two groups in Alabama-Mississippi.

Table 1

KENTUCKY AREA			ALABAMA-MISSISSIPPI AREA		
Counties	**Percent All Families Poor**	**Percent Black Families Poor**	**Counties**	**Percent All Families Poor**	**Percent Bl Families P**
Adair	34.4	53.9	Butler	40.8	70.1
Bell	39.2	41.7	Crenshaw	45.4	73
Cumberland	37.9	85.6	Hale	54.9	72.9
Harlon	36.2	48.3	Lamar	38.8	73.8
Letcher	40	40.4	Greene	65.5	82.1
Perry	39.1	55.3	Lowndes	61.8	76.3
Pike	31.8	42.9	Perry	47.5	67.1
			Pickens	40.5	70.6
			Sumter	53.1	69.8
			Wilcox	56.8	76.3
			Dallas	40.2	66.3
			Marengo	46.4	72.3
			Kemper	56.1	74.3
			Noxubee	59	79.8
			Winston	39.3	68.7
Average	36	54	Average	41.1	66.9

Source: *U.S. Census of Population, 1970.*

Table 2

	Percent Black Families Poor	**Percent All Families Poor**	**Difference**
Kentucky	54	36	18
Alabama-Mississippi	66.9	41.1	25.8

Source: Calculations based on *U.S. Census of Population, 1970,* data.

PERCENT BLACK FAMILIES POOR

1970

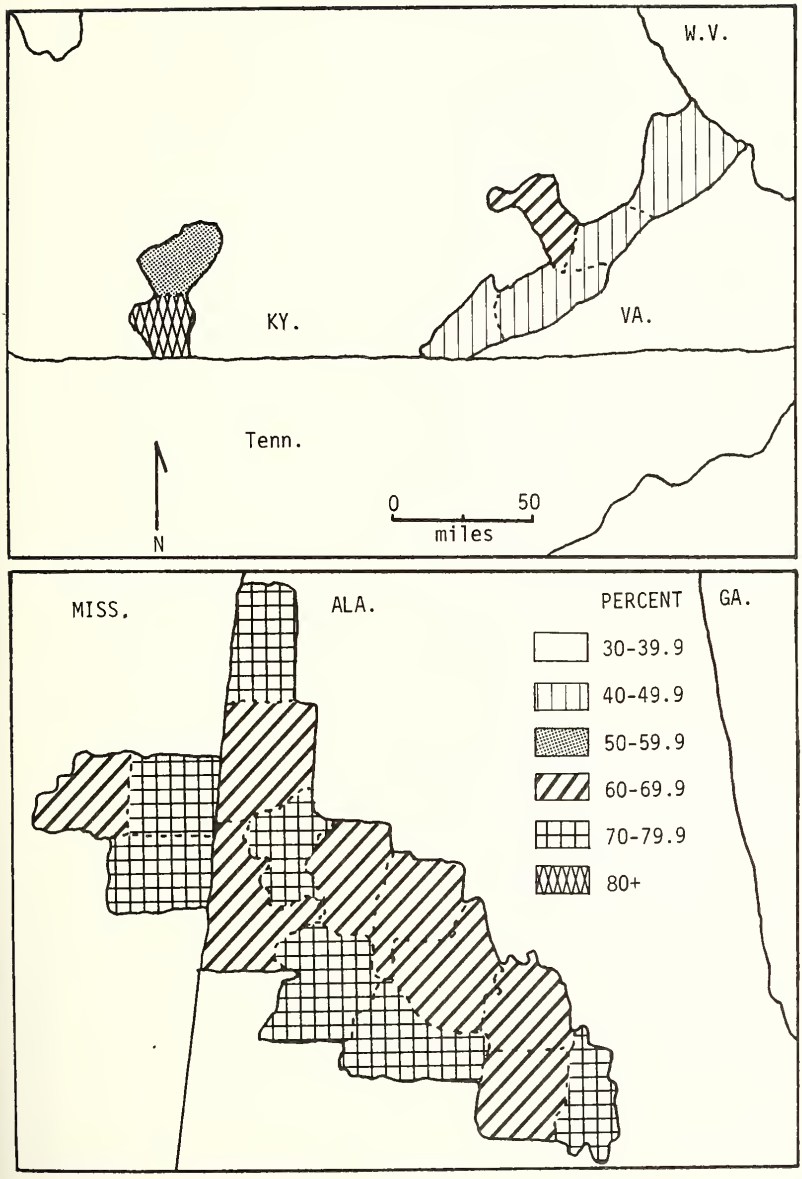

FIGURE 3

PERCENT ALL FAMILIES POOR
1970

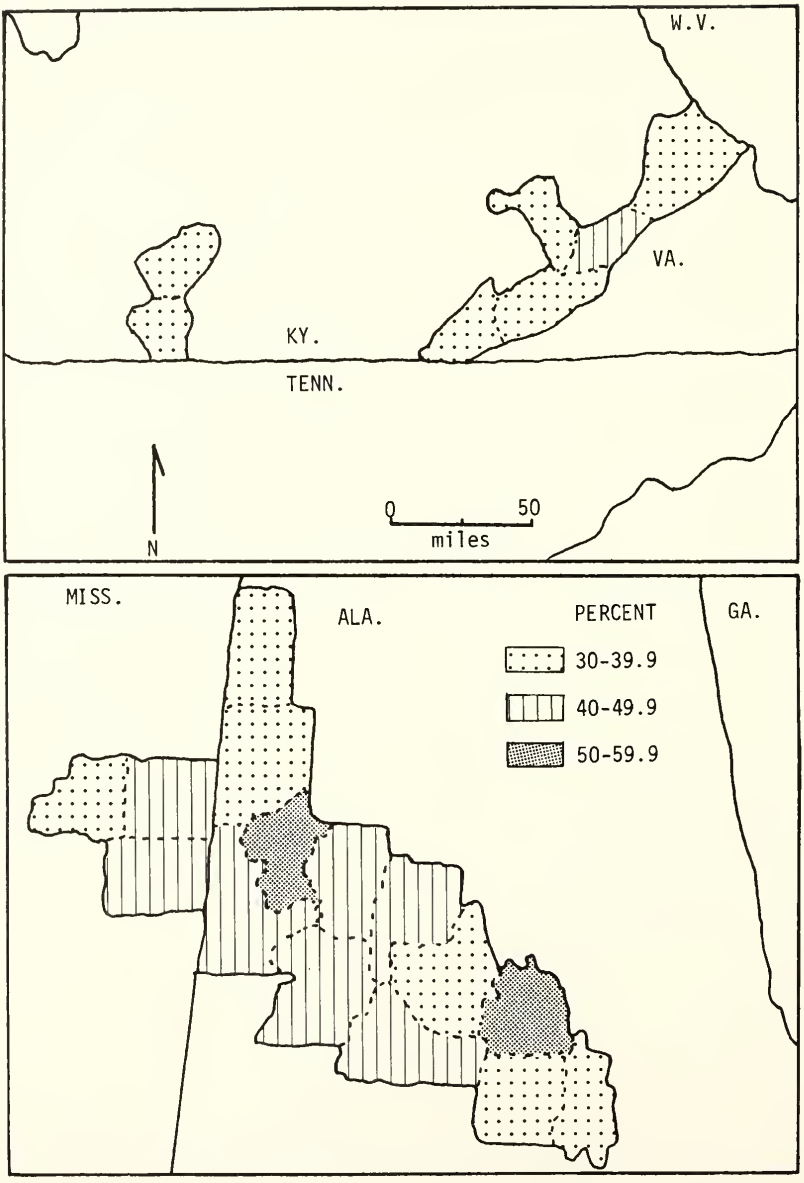

FIGURE 4

Table 3

Counties	Percent All Persons Poor	Percent Black Persons Poor	Counties	Percent All Persons Poor	Percent Black Persons Poor
Adair	43.2	77.3	Butler	61.8	76.3
Bell	35.7	39.5	Crenshaw	40.8	70.1
Cumberland	46.3	89.3	Hale	56.8	76.3
Harlon	45.3	52.9	Lamar	47.5	67.1
Letcher	42.2	49.6	Greene	46.4	72.3
Perry	44.6	69.2	Lowndes	53.1	69.8
Pike	44.2	38.2	Perry	54.9	72.9
			Pickens	65.5	82.1
			Sumter	45.4	73.0
			Wilcox	40.5	70.6
			Dallas	38.8	73.8
			Marengo	40.2	40.2
			Kemper	56.1	74.3
			Noxubee	59	79.8
			Winston	39.3	68.7
Average	42	62	Average	49.7	72.8

Source: *U.S. Census of Population, 1970.*

Table 3 illustrates the relationship of percent Black persons poor in the Kentucky area to percent Black persons poor in Alabama. Approximately 10 percentage points separate the two groups. However, when viewed in the context of all families poor the percentage of Black persons poor does not diverge significantly. Approximately 23 percentage points separate Black persons poor in the Kentucky area and Black persons poor in the Alabama-Mississippi area, while 20 percentage points separate all persons poor in the two areas. Figure 5 depicts graphically percentage Black persons poor for the two study areas. Again with this variable, the county patterns show that Cumberland County in the western section of the study areas distorts the average for percent Black persons poor. When a comparison of Figure 5 is made to Figure 6 (percent all persons poor), it is illustrated that counties in the Kentucky area show less discrepancy between percent Black persons poor and all persons poor than does the Alabama-Mississippi counties. Thus it can be inferred that as with percentage Black families poor, Black persons poor are similarily better off in the Kentucky area where fewer Blacks live.

PERCENT BLACK PERSONS POOR
1970

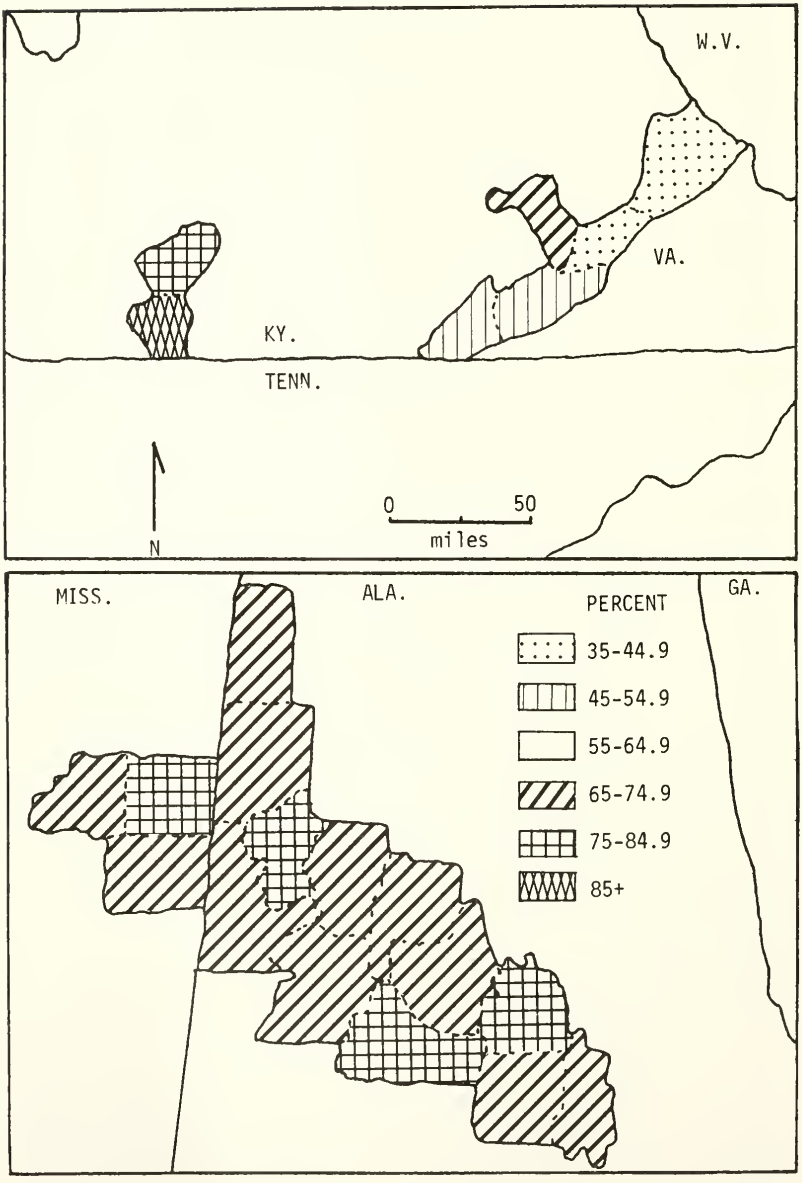

FIGURE 5

PERCENT ALL PERSONS POOR
1970

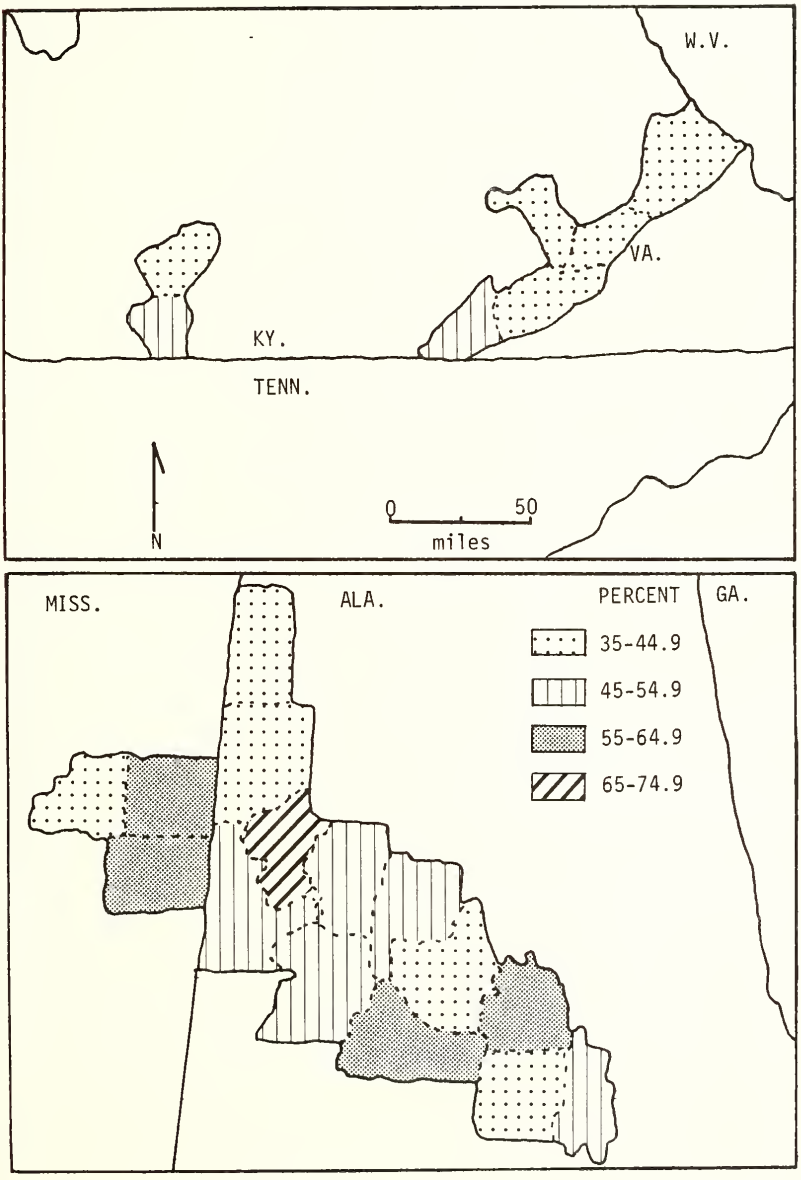

FIGURE 6

MEDIAN BLACK FAMILY INCOME, 1970

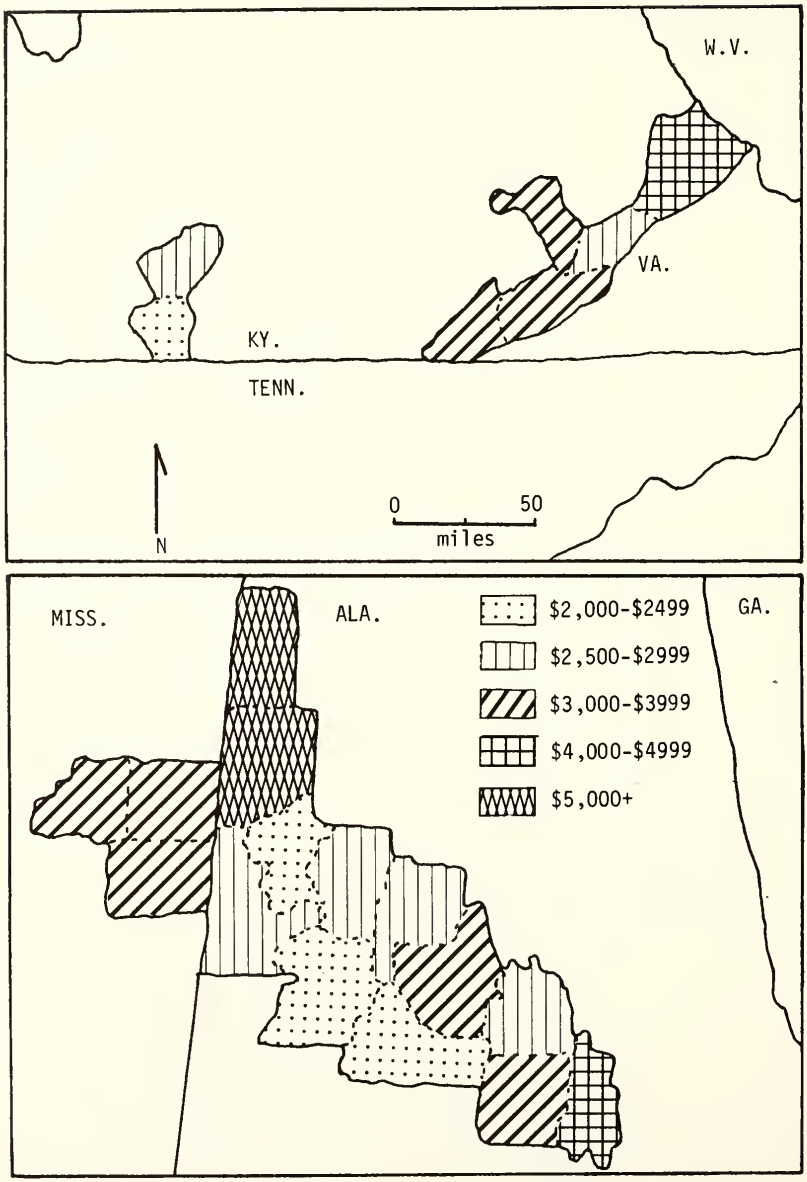

FIGURE 7

Figure 7 depicts median Black income for the respective study areas. Two counties in the Alabama-Mississippi area have $5000 plus median incomes which raises the average of the area considerably. Conversely the Kentucky area has no county with a high median income. However, the Kentucky area has over 42 percent of its counties with an income between $3000 and $4000. Conversely, the Alabama-Mississippi area has only 33 percent of its counties in this range. Similarily, the Kentucky area has only 14 percent of its counties with a median income in the $2000 to $2499 class while 20 percent of the Alabama-Mississippi area falls into this class.

Table 4 illustrates that when averages for the two variables of percent Black families and percent Black persons poor are compared to

Table 4

	Percent Black Families Poor	Percent All Families Poor	Difference	Percent Black Families Poor	Percent All Families Poor	Difference
Kentucky	54	36	18	62	42	20
Alabama-Mississippi	66.9	41.1	25.8	72.8	49.7	23.1
Differential			7.8			3.1

Source: Calculations from *U.S. Census of Population, 1970.*

percent all families and persons poor that a variation in poverty exists between the two areas.

A differential of 7.8 percent exists between poverty of Black families/all families in the Kentucky areas and poverty of Black families/all families in the Alabama-Mississippi area. Such difference leads one to infer that in relative terms, Blacks in the Alabama-Mississippi area are poorer than those in the Kentucky area. A differential of 3.1 percent also exists between poverty in Black persons/all persons in the Alabama-Mississippi area. Although the difference is not as large, the same conclusion can be drawn.

Summary

It has been shown that Blacks in general live in higher economic brackets in the seven counties of the eastern portion of Kentucky than Blacks in south central Alabama and Mississippi. Therefore, there is cause for the tentative acceptance of the hypothesis that Blacks are

significantly higher in the economic structure when located in an area with a low percentage Black population than when located in an area with a high percentage Black population.

Due to superficial analysis, only guarded inferences can be made concerning the effects of social and economic conditions on the relative economic state of blacks in the two areas. Two aspects of economic and social conditions seem to play an important role. Of primary importance is the economic situation which exists in the coal mines of the Kentucky area. Blacks are employed in the mines[4] and due to small total number of Blacks, the mining jobs have a significant effect on the standard of living. Conversely, in the Alabama-Mississippi area, the agricultural nature of the area provides little choice of economic activity for the large numbers of Blacks.[5] Secondly, the existence of large numbers of Blacks in the Alabama-Mississippi area poses a greater economic threat than do the small number in the Kentucky area. Therefore, logically there is more competition between Blacks and other racial groups for the better jobs. Such a relationship is intuitively implied and only by more depthful analysis can this relationship be verified.

It is obvious from the data presented that a difference in economic status among Blacks exists between the two areas with similar overall poverty. However, only by a more wide range analysis of interrelated variables can the condition be fully explained.

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U.S. Department of Commerce. Bureau of the Census. *General Social and Economic Characteristics, 1970.* Kentucky. *No. 19.* Table 128.

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[4] Interview with Tom Ross past resident of Wyoming County, West Virginia, Knoxville, Tennessee, May, 1973.

[5] C.L. White, E.J. Foscue, and T.L. McKnight, *Regional Geography of Anglo-America,* (Englewood Cliffs, New Jersey, 1964), pp. 165-6.

SOLAR ECLIPSES

by B.E. POWELL*

In ancient times, eclipses of the sun were mysterious, dreaded, and, in many cases, terrifying events. Some of the ancient people, such as the Chinese and Babylonians, developed procedures to predict the occurrence of eclipses, even though they did not understand the cause of an eclipse.[1] Some people believe that Stonehenge was used to foretell eclipses.[2]

The cause of a solar eclipse is now understood. As is shown in Figure 1, an eclipse occurs when the moon passes between the earth and the sun and blocks out light which would otherwise illuminate the earth. Because the sun has a finite size (instead of being a point source), the moon's shadow has two parts: the penumbra (in which part of the light from the sun reaches the earth) and umbra (in which all the sunlight is blocked). The situation depicted in Figure 1 occurs during the phase of the moon known as the new moon. However, a solar eclipse does not

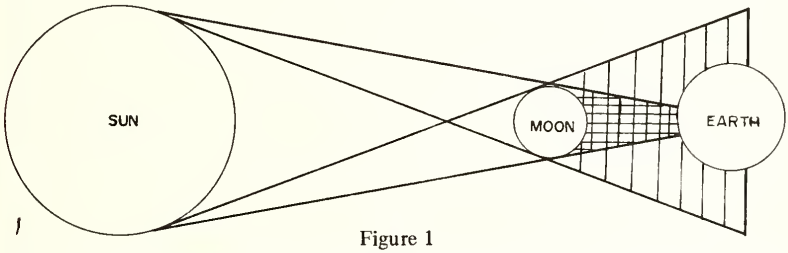

Figure 1

occur each time the moon is in this phase because the orbit of the moon about the earth is inclined 5° with respect to the orbital plane of the earth about the sun, as shown in Figure 2. The only place the earth, sun, and moon line up properly for an eclipse is along the intersection of the two orbital planes, which is known as the lines of nodes (line AA' Figure 2). Hence, a solar eclipse occurs only when the moon is new moon phase near the line of nodes. An eclipse may occur nineteen days before or after the crossing of the line of nodes. During this period of thirty-eight days, (an eclipse season), there may be two eclipses since a new moon occurs every 29 1/2 days. Since the moon crosses the line of nodes every 173.3 days (which is slightly less than every six months), the number of solar eclipses varies from two to five per year. The maxi-

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[1] S.A. Mitchell, *Eclipses of the Sun*, Fourth Edition (New York: Columbia University Press, 1935), pp. 1-52.

[2] Gerald S. Hawkins, *Stonehenge Decoded*, (Garden City: Doubleday, 1965), pp. 132-159.

mum number occurs in years in which there is one crossing of the line of nodes in early January, another in the summer, and a third in late December; there would have to be two eclipses in two of the eclipse seasons.[3]

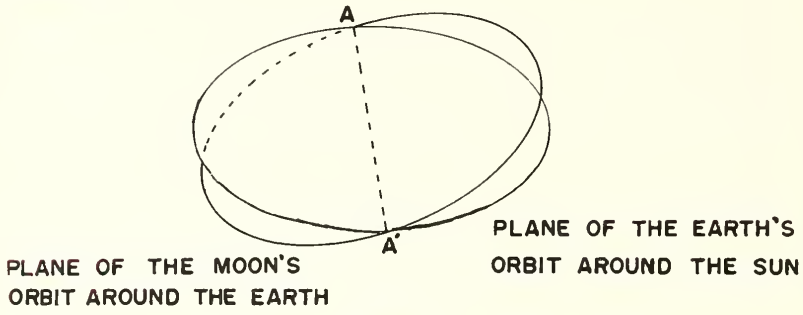

Figure 2

Three types of solar eclipses—partial, annular, and total—are observed.

When the new moon is not exactly on the line of nodes, only the penumbra of the moon's shadow strikes the earth and a partial eclipse is seen. A partial eclipse also accompanies the other two types of eclipses. Observers outside the central path would be in the penumbra. Before and after the annular phase or total phase of an eclipse, observers in the central path would experience a partial eclipse. The area in which a partial eclipse may be seen extends 3000 kilometers (about 2000 miles) on either side of the central path.[3]

When the new moon is sufficiently close to the line of nodes and when the apparent size of the sun is greater than that of the moon, an annular eclipse is seen. Although the angular sizes of the sun and moon are approximately equal (about 30 seconds of an arc), the angular sizes of these object vary. The earth revolves the sun in an elliptical orbit (with the sun at a focus of the eclipse); the distance between the earth and the sun varies from about 91,000,000 miles to about 95,000,000 miles. The apparent angular sizes of the sun is larger in January when the earth is close to the sun than in July when the earth is further from the sun. Likewise, as the moon revolves about the earth, its distance

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[3] See, for example: Charles H. Huffer, Frederick E. Trinklein, and Mark Bunge, *An Introduction to Astronomy*, Second Edition (New York: Holt, Rinehart and Winston, Inc., 1973), pp. 246-253. Donald H. Menzel, Fred L. Whipple, Gerald de Vancouleurs, *Survey of the Universe*, (Englewood Cliffs: Prentice Hall, Inc., 1970), pp. 218-227. Cecilia Payne-Gaposchkin and Katherine Haramundanis, *Introduction to Astronomy*, Second Edition (Englewood Cliffs: Prentice Hall, Inc. 1970) pp. 174-183. J. Allen Hynck and Necia H. Apfel, *Astronomy One*, (Menlo Park: W.A. Benjamin, Inc., 1972), pp. 267-277. Lloyd Motz and Anneta Duveen, *Essentials of Astronomy* (Belmont: Wadsworth Publishing Company, Inc., 1968), pp. 124-129.

varies accordingly. When the moon is relatively far from the earth, the umbra of the moon's shadow does not reach the earth. The outer portion of the sun is visible around the moon at a mid-eclipse. The presence of this annulus is the origin of the name of this second type of eclipse. At the equator, an annular eclipse can last as long as twelve minutes.[3] On May 30, 1984, Carrollton, Georgia, will be close to the center of an annular eclipse.[4]

When the angular size of the moon is larger than the angular size of the sun and the earth, moon and sun line up properly at the new moon phase, the third type of an eclipse—a total eclipse—is seen. As the eclipse begins (first contact), the moon comes between the observer and the sun. More and more of the solar surface is obscured as time elapses. Near totality (second contact), the phenomena known as shadow bands may be seen; the origin of these moving patterns of variations in brightness is not understood but is probably some type of atmospheric disturbance. Bailey's beads (caused by light shining through irregularities on the moon's surface) may be seen just before totality. If light coming through a single depression is unusually bright, the occurence is called the diamond ring effect, since it resembles light reflected from a solitary diamond ring. During totality, the chromasphere (reddish, inner part of the sun's atmosphere) and the corona (outer portion of the solar atmosphere, which extends millions of miles from the surface of the sun) are seen since the light from the brighter photosphere (surface of the sun) is hidden by the moon. Bright stars and planets (such as Mercury and Venus) may also be seen. Totality may last up to about 7.5 minutes and may be experienced in a strip of land (known as the path of totality) having a width of less than 200 miles. At third contact, totality ends as the sun re-appears from behind the moon. Bailey's beads, the diamond ring effect, and shadow bands may be seen. With the passage of time, more of the photosphere becomes visible. The partial phase of the eclipse ends with the fourth contact, when none of the solar surface is covered by the moon. The elapsed time from first contact to fourth contact is about two hours.[3]

The longest total solar eclipses (7 minutes 40 seconds) are seen on the equator when the earth is at aphelion (greatest distance from the sun), the moon is at perigee (closest to the earth), and the new moon occurs at the crossing of the line of nodes. At a latitude of 45°, the maximum duration of an eclipse is 6 1/2 minutes. The speed of the moon's shadow across the earth near the equator is about 1600 kilometers per hour (or 1000 miles per hour).[3]

It is possible to calculate the occurrences of eclipses for thousands of years in the past as well as for hundreds of years in the future.[4,5]

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[4] Jean Meeus, Carl C. Grosjean, and Willy Vanderleen, *Canon of Solar Eclipses,* (New York: Pergamon Press, 1966), pp. 46-74.

[5] Theodor von Oppolzer, *Canon der Finsternisse* (New York: Dover, 1963).

There are several interesting applications of knowing the time and area experiencing a total eclipse. Archaeologists are able to date ancient manuscripts on drawings which describe eclipses. For example, the Hebrew prophet Amos had probably seen the solar eclipse of 763 B.C. when he wrote (in Amos 8:9) "I will cause the sun to go down at noon, and I will darken the earth on a clear day." Scientists have determined that the length of the day is increasing, because the calculated path of totality lies east of the actual paths of totality observed during well documented ancient eclipses. The length of the day changes by 0.0016 seconds per century. The cause of this increase is the slowing down of the rotation of the earth about its axis because of friction associated with tides in shallow seas.[3]

Some of the ancient people realized eclipses are repeated in cycles. Edmund Halley named this repetition the Saros. The cycle results from the fact that 18 years 11 1/3 days is nearly equal to 19 eclipse years (the period of time, 346.62 days, between the aligning of the earth, sun and moon on the same node), and to 223 synodic months (measured relative to the sun and earth). After this time, the earth, moon, and sun will be in the same position as occured for the earlier eclipse since the moon will be in the proper place each eclipse year and in the proper phase each synodic month. However, the eclipse will occur about 120° west of the earlier eclipse because of the 1/3 day in the repetition period. An eclipse will occur in essentially the same place after three such periods. About half of the eclipses in a Saros cycle will be total or annular.[3]

Total solar eclipses present an opportunity to study a variety of physical phenomena, such as the atmosphere of the sun (corona and chromosphere), effect of gravitational forces on light coming from distant stars, and effect of solar radiation on the earth's surface and atmosphere. Biological effects have also been observed. The effects of a total eclipse on the feeding and sleeping habits of animals have not been well documented, even though some references indicate cows will go toward a barn at the beginning of the total phase and that roosters will crow when totality ends.[3]

The path of totality of the March 7, 1970, eclipse crossed the southern and coastal part of Georgia; the author was near the Savannah River near Tillman, South Carolina, during the eclipse. The path of totality of July 10, 1972, eclipse crossed Alaska and Canada; the author was one mile from the center line near Cap Chat, Quebec, during the eclipse.[6] In both cases, however, totality was obscured by cloudy skies. During both eclipses the brightness of the sky did not change appreciably to the human eye until just before totality. Some observers have

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[6] Charles H. Smiley, "An Eclipse of the Sun for North America," *Sky and Telescope*, 35, no. 3 (March, 1968), 147-150. Charles H. Smiley, "The Alcan Total Eclipse of July 10, 1972," *Sky and Telescope,* 41, no. 1 (January, 1971), 10-13.

equated the darkness of totality with the brightness of a night when there is a full moon. The author did not find either eclipse to be that dark since it was not difficult to see nearby objects (such as settings on a camera). The decrease in light was also accompanied by a drop in temperature. The decrease in temperature was particularly apparent during the March 7, 1970 eclipse. As totality ended, the intensity of light increased dramatically, and the temperature slowly increased.

During the July 10, 1972 eclipse, the temperature was measured during the eclipse. The results are shown in Figure 3. The decrease was not as large as reported by investigators during earlier eclipses.[7] The

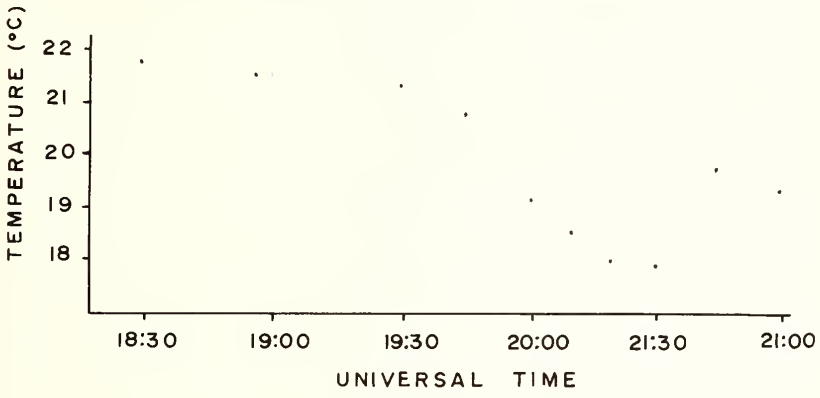

Figure 3

temperature decrease was probably moderated by the presence of the St. Lawrence River, since the measurements were performed near the south bank of this river. The clouds, which became progressively thicker, probably prevented the return to the pre-eclipse temperature after totality ended.

The variations in brightness during the July 10, 1972 eclipse were measured with a photo-cell and ammeter. Figure 4 shows the variations at Cap Chat, Quebec, and the variations at Carrollton, Georgia, where approximately 50% of the sun's surface was eclipsed. The zenith light intensity was measured at Cap Chat because the clouds prevented a study of light coming directly from the sun. The light during totality decreased to less than 5% of the value at 4:00 p.m. when only about half the sun was eclipsed. The readings at Carrollton were made by Robert Mason, a physics major. In this case, the mid-eclipse valve was about 55% of the initial reading.

The last total eclipse visible in the United States during the remainder of this century will occur on February 26, 1979. The path of

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[7] "Total Eclipse Along the Eastern Seaboard", *Sky and Telescope,* 39, no. 5 (May, 1970), 285-289.

totality will cross the state of Washington.[4] Perhaps the skies will be clear on that date.

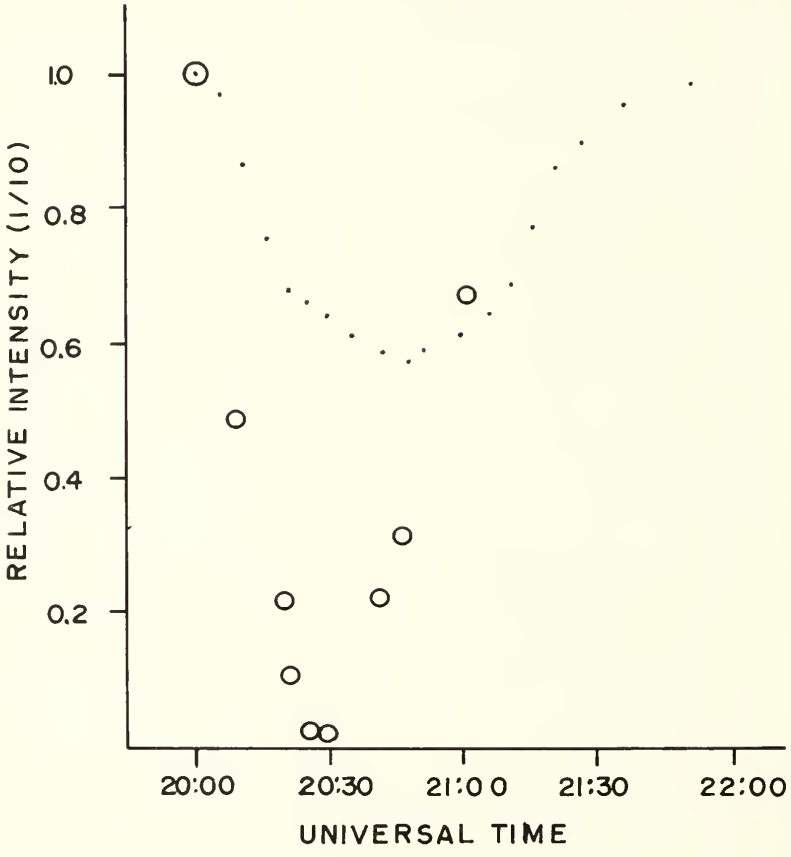

Figure 4

Light variations at Cap Chat, Quebec and at Carrollton, Georgia. The open circles give the zenith light variation at Cap Chat (total eclipse). The dots give the variation of light coming directly from the sun as measured at Carrollton (50%).

MANAGEMENT AND THE NATURE OF MAN

by J. Lincoln DeVillier* and
Mary Anne G. DeVillier**

A fundamental principle of management is that responsibility should be commensurate with authority. In a free economic society, persons holding positions of authority—in business, in labor organizations, and in other areas—are ultimately accountable to society for their actions. They have social responsibility, that is, the obligation to act in accord with socially accepted values and also to place the values of society above their own should there be conflict of interest. "Public responsibility," "public morality," and "social obligation" are terms used synonymously; and the responsibility is generally assigned to management in all areas.

The continually expanding interest in the social responsibility of various types of executives would lead a casual observer to conclude that enlightened man in his innate goodness has evolved a new philosophic concept of relations between labor and management, governed and government, buyer and seller. Unfortunately, as history reveals, social responsibility has not evolved out of the innate goodness of man. Rather, society has forced social responsibility on management because of social abuses either fostered or tolerated by persons in responsible positions. Business management is being forced to accept responsibility for training and employment, for truth in advertising, for honesty in trading, for alleviation of sub-standard living conditions among workers. Labor management is being forced to account for manipulation of unions funds, for exploitation of members for prolongation of strikes which endanger the stability or the safety of the nation. Political management is being held accountable for the solicitation and use of campaign funds, for conflicts between public and personal interest, for kickbacks on contracts. Professionals—accountants and attorneys not necessarily in management positions—are being held accountable to the public for the trust placed in their professions.

Some of the pressure by the public for correction of social abuses is applied through the Federal Government, but awareness is growing that governmental programs may alleviate but do not correct. Involvement of non-management individuals—especially of the young and the poor—is often suggested as the missing ingredient of the recipe by which twentieth century America is to become the fulfillment of the eighteenth century dream of a new Garden of Eden, a perfect society in which no one is poor, no one is miserable. Unfortunately, the root of the problems besetting twentieth century society is embedded not in political, social, and economic conditions but in the human condition. Obviously, people are hungry. People live in housing unfit for habitation. People

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are ignorant, unskilled, unemployed. Basic logic dictates, however, that before solutions can be found, the problem itself must be recognized. The problem is not distribution of wealth. It is not equal opportunity. It is not social equality. The problem is this: the nature of man.

Assessment of the Nature of Man

Management cannot perform its functions effectively unless it can properly assess the nature of the men involved. Is man an intellectual being motivated by reason? Or a physiological being motivated by gratification of the senses? Or perhaps a creature of both reason and emotion who may, by virtue of his immortal soul, strive with hope toward perfectibility? In short, those who desire to formulate the social responsibilities of executives must first examine closely their ideas about the nature of man and the relationship of that nature to the social structures men devise to attain their goals. Then perhaps men can apply the techniques and technology of the twentieth century to the solution of the social problems which plague mankind.

A prevalent view in the United States is that Americans, whether or not they profess the faith, live in a Christian society and strive for Christian goals. Certainly, the founding fathers of the confederation which evolved into the United States of America couched their ideas in the socially efficacious phrases of Christianity. As a result, many Americans believe theirs to be a free society based on the God-fearing Protestantism of the Puritans. Actually, social ethics of the United States of America—if one can assume any conscious body of thought—are far from Christian, and always have been. The founding fathers who have probably exerted the strongest influence on the basic concepts of this society are Thomas Jefferson and Benjamin Franklin, neither of whom was a practicing Christian, although both, as was the custom, gave lip-service to traditional Christian practice. Their conceptions of the nature of man are like those held by other philosophers of the Age of Reason; but the philosophers of the eighteenth century were the product of the seventeenth, for it was in the seventeenth century that the real fragmentation of Christian thought occurred. As S.L. Bethell puts it, "the purification of science from contaminating theological influence was a permanent achievement" of that century.[1] The laws of nature became mathematical equations, and reliance on faith became reliance on reason. Out of that revolutionary century came three basic concepts of the ideal society, each based on a definite concept of the nature of man, for man's social structures reflect his ideas of God, of self, and of other men. Seventeenth and eighteenth century philosophers in general and John Milton and Thomas Hobbes in particular expressed fully and often eloquently their ideas about man and

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[1] S.L. Bethell, *The Cultural Revolution of the Seventeenth Century* (London: Dennis Dobson Ltd., 1951), p. 62.

society, ideas which are equally relevant today.

The seventeenth century secularization of religious thought, in effect, separated man from God and denied him the fulfillment of his deep spiritual need for identification with the Deity. In a very real sense, the emancipation of the Enlightenment set man adrift in the universe: the faith that bound man securely to God was destroyed by the goddess Reason. Locke says of reason and faith: "Nothing that is contrary to, and inconsistent with the clear and self-evident Dictates of Reason, has a Right to be urged, or assented to, as a Matter of Faith, wherein Reason hath nothing to do."[2] To Locke has been given credit for making acceptable the concept that men, by their own efforts and intelligence, could bring their ideas, their conduct, and their institutions into harmony with the natural order of the universe. The Declaration of Independence, attributed largely to Thomas Jefferson, echoes the thoughts and words of Locke and the French *philosophes:* "to assume, among the powers of the earth, the separate and equal station, to which the laws of nature and nature's God entitle them." Their substitute for faith was human experience. In their new society, man would live in a state of felicity. To achieve this goal, however, the philosophers must first isolate and enumerate the qualities common to all men in all times. Then they could determine which customs, ideas, and institutions in their own time were disharmonious and consequently evil. The articles of faith which evolved in the Enlightenment are these: (1) man is not naturally depraved; (2) the end of life is a good life on earth; (3) man can, if he follow the light of reason and experience, perfect that good life; and (4) the essential condition of living the good life is freedom of the mind from the bonds of ignorance and superstition and of the body from the oppression of civil authority.[3] The implications are clear: all men are naturally good; only "disharmonious" institutions are bad. Given freedom from ignorance and civil oppression, man can devise social structures which provide the good life. And the seventeenth century philosophers' faith in reason lives on.

John Milton's concept of man is quite different from that of Locke and the other seventeenth century philosophers. Miltonic man is part of the One God and is, therefore, free. Motivated by love of God, he lives by "right reason," his God-given passions governed by his God-given reason. "For, indeed," he says, "none can love freedom heartily but good men; the rest love not freedom but license."[4] Discipline is

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[2] Quoted by Bethell, p. 15.

[3] Carl L. Becker, *The Heavenly City of the Eighteenth-Century Philosophers* (New Haven: Yale University Press, 1932), pp. 102-102. The discussion of eighteenth century humanism, particularly that pertaining to the tenets of the *philosophes,* is based largely on Professor Becker's book.

[4] John Milton, "Tenure of Kings and Magistrates" in *John Milton: Complete Poems and Major Prose*, Merritt Y. Hughes, ed. (New York: Odyssey Press, 1957), p. 750.

the key to the Miltonic man, self-discipline. By exercise of free will—the power to choose—a man may discipline his pride into Christian temperance, his vices into Christian virtues. His intellect is disciplined by study; his body, by exercise. He fulfills his moral, religious, and civil obligations, not grudgingly as a duty but cheerfully as a privilege. Friendly, courteous, thoughtful, he loves his neighbor as himself. He is kind. He goes the second mile; but he is stern in righteous anger when principles are violated. Rendering unto Caesar the things that are Caesar's, he guards jealously the religious liberty upon which his whole way of life is based. Those who hold wealth and power do so by God's grace. They act as God's stewards. Those who are chosen to control others will first have demonstrated their ability to control themselves.

On the surface, Milton would appear to agree with the scientifically oriented philosophers that man is a reasoning creature who, if given freedom to do so, will build a social structure which provides peace and tranquility for all. The reason of the philosophers, however, is the logical faculty of a Locke, a Descartes, or a Hobbes. Milton's reason is "right reason," the *recta ratio* which includes virtue as well as knowledge, faith and intuition, and feeling as well as rational processes. Swift's Houyhnhnms, those highly intellectual creatures guided solely by reason, are no farther from Milton's conception of man than the logical man of the philosophers.

The Hobbesian concept of man, on the other hand, scarcely seems to qualify man as a rational creature. He is a materialistic creature driven by his passions, not governed by reason. In fact, says Thomas Hobbes in *Leviathan*, reason is "nothing but reckoning," the sum of experience.[5] "For there is no conception in a man's mind, which hath not first, totally, or by parts, been begotten upon the organs of Sense" (*L*, p. 1); he can merely add, subtract, multiply, or divide experience. Since he believes the future to be a mere "fiction of the mind," he can scarcely believe in God. Consequently, he has no religious or ethical basis for his life. There are, for him, no absolutes. Good and evil exist only as relative values: what is desirable is good; what is undersirable, evil.[6] Hope is merely appetite; courage, merely anger. The one constant in the life of Hobbesian man is fear; upon this rock he built his

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[5] Thomas Hobbes, *Leviathan*, A.D. Lindsay, ed. (New York: E.P. Dutton, 1950), p. 142. Subsequent citations will be indicated by *L* and page numbers in parentheses.

[6] In *The Hunting of Leviathan* (Cambridge: The University Press, 1962), p. 27, n. 1. Samuel I. Mintz points out that he and Michael Oakeshott agree that Hobbes does not ground natural law in absolute morality and that Leo Strauss and Howard Warrender argue that Hobbes does. In an appendix "Other Interpretations" to *The Political Philosophy of Hobbes* (Oxford: The Clarendon Press, 1957), Howard Warrender compares his own interpretation to that expressed by Michael Oakeshott in the introduction to the latter's edition of Hobbe's *Leviathan* (Oxford: Basil Blackwell, 1946).

house. The first law of nature, for Hobbes, is self-preservation. A man is justified in doing anything which preserves his life and averts injury or harm to his person or well-being. For him, free will is his "natural right" to take what he wants, to do what he desires within the limits of his physical and mental capacity to defeat his competitors. Selfish and brutish, he seeks only ease and sensuous pleasures. His general inclination is "a perpetual and restless desire of Power after power, that ceaseth only in Death" (*L*, p. 79). He is consequently, constantly at war in one way or another, seeking self-gratification at the expense of others. His "liberty" is that of the jungle. The only feasible social structure for such a creature is a power structure which can exercise firm control over all phases of his life.

The contrast between Milton and Hobbes is obvious. Milton's emphasis is on freedom: Self-disciplined men of integrity serve as guides so that all may exercise wisely their God-given freedom of choice. Hobbe's emphasis is on power: Fearful men subject themselves to the holder of power, purchasing security by the surrender of will and judgment.

A Historical Perspective

On the surface, it would appear that the United States enjoys a largely Miltonic society. The citizens freely elect representatives to guide them in the exercise of their free will, whether by voting at the polls or by investing in a business or by retaining a professional to represent them. Apparently, however, these leaders are not all Miltonic men governed by "right reason." Especially around the end of the nineteenth and the beginning of the twentieth century was much evil condoned in the name of progress. In spite of the professed humanistic philosophy of the nation, human life and suffering counted for little. In the name of progress, the weak were exploited by the strong. In describing business practices at the turn of the century, the editors of *Fortune* commented that at that time "American capitalism seemed to be what Marx predicted it would be and what all the muckrakers said it was—the inhuman offspring of greed and irresponsibility."[7] Harold Underwood Faulkner, the historian, remarked in *The Quest for Social Justice* that "to many thoughtful men in opening years of the twentieth century it seemed that America in making her fortune was in peril of losing her soul."[8]

Today, however, the concept of social responsibility on the part of

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[7] Morrell Heald, "Management's Responsibility to Society: The Growth of an Idea," *Business History Review*, XXXI (Autumn, 1947), 376.

[8] Harold Underwood Faulkner, *The Quest for Social Justice, 1898-1914*, Vol. XI in *A History of American Life*, series edited by Arthur M. Schlesinger and Dixon Ryan Fix (New York: The MacMillan Company, 1931), p. xv.

executives is firmly established. But this concept has not been voluntarily accepted. History is replete with examples that support the earlier statement that "society has forced social responsibility on management because of social abuses either fostered or tolerated by persons in responsible positions." Keith Davis has observed that "the avoidance of social responsibility leads to gradual erosion of social power."[9] Davis points out that because business long denied any major responsibility for unemployment, it subsequently lost to government some of its power. Now business finds itself paying unemployment costs for which it originally denied responsibility and at the same time exercising less authority than before. That is, business has lost some of its social power. Also, continual management abuses brought on a succession of legislation favorable to labor, notably the Norris-LaGuardia Anti-Injunction Act of 1932 and the Wagner Act of 1935. Subsequent abuses of newly won power by labor and its representatives resulted in legislation to curb the newly gained power of labor: the Lea Act of 1946 (sometimes known as the Anti-Petrillo Act), the Taft-Hartley Act of 1947, and the Landrum-Griffin Act of 1959. Passage of the Wagner Act was the result of long public displeasure over lack of public morality evidenced by the activities of employers and managers. Passage of the Taft-Hartley Act and the Landrum-Griffin Act resulted from public displeasure over the socially irresponsible activities of labor. Each of these facets of the economy—management and labor—had chosen to exercise authority while neglecting social obligations; and the public responded by forcing executives of both management and labor into more socially acceptable behavior. This pressure for social responsibility has now spread to professional fields formerly concerned with use of their skills solely for the benefit of their clients without regard for society as a whole. Now accounting and legal firms are held responsible for considering the interest of public investors when representing their clients. Action against such firms by the Securities and Exchange Commission was reported in a February 15, 1972, issue of the *Wall Street Journal*. The success of Ralph Nader in the matter of automobile safety, the passage of conservation laws restricting industrial practices, the passage of consumer protection laws and the creation of consumer protection agencies all attest the power of public pressure to force more and more segments of the economy to accept social responsibility.

The Nature of the Problem

The concept of social responsibility on the part of executives has been firmly established. When executives of labor or management

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[9] Keith Davis, "The Changing Climate of Business Social Responsibilities," *Current Issues and Emerging Concepts in Management*, Paul M. Dauten, ed. (Boston: Houghton Mifflin Company, 1962), p. 72.

disregard such responsibilities, the public places restriction on their operations and also forces them to assume responsibility in some indirect way. The problem begins to reveal itself, then, as not economic or even political but philosophical. The philosophical assumptions of the seventeenth century about the nature of man which form the bases for current thinking offer several solutions to the problems of man in society. If one accepts the premise of the seventeenth century *philosophes* that men are both innately good and guided by reason, that institutions corrupt, then one may logically conclude that elimination of institutions will solve man's problems. But not even the most optimistic of American Transcendentalists advocated elimination of institutions as a solution to even the social problems of man.

If one accepts the premise of Hobbes that men are motivated by appetite and fear, then one may logically conclude that some power structure must exercise strict control over all phases of life. But an Orwellian world can evolve just as easily from a socialist left as from a facist right. Neither Lenin nor Hitler disproved the lesson of history that absolute power corrupts. Hobbesian controls are applicable only to Hobbesian men, and the Hobbesian ruler has no interest but his own.

If one accepts the premise of Milton that men are essentially good and can discipline themselves, by God's guidance, to proper exercise of their free will in the public interest, one may conclude that men are able to structure a free and open society in which no one will be oppressed or exploited. Yet history reveals no such society before or since the seventeenth century.

As a matter of fact, the twentieth century has not rejected the seventeenth century myth that research and analysis can supply a solution to the problem of the human condition. People cry, "If we can go to the moon, we can eliminate poverty." So the population, wittingly or not, spends millions yearly on studies such as analysis of "personality traits fostered in school and on the job."[10] Nor has the twentieth century rejected Hobbes's concept of human nature. The increasing arrogation by central authority of the exercise of both will and judgment is clear evidence that both political right and left believe in the necessity for firm control. Men must be forced to share the cost of regulated relief of financial distress, forced to restructure their cultural patterns, forced to assume whatever sociological obligations the current power group dictates. Neither has the twentieth century rejected Miltonic optimism that man can structure a perfect society in which, as Walt Whitman phrased it, "... all ... men ever born are also my brothers, and the women my sisters and lovers."[11] The ideological lines are not, however,

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[10] A. Kent MacDougall, "A Different View: The Unorthodox Ideas of Radical Economists Win a Wider Hearing," *Wall Street Journal*, February 11, 1972, p. 1.

[11] Walt Whitman, "Song of Myself," *Leaves of Grass*, in *The Collected Writings of Walt Whitman*, Gay Wilson Allen and Sculley Bradley, eds. (New York: New York University Press, 1965), p. 33.

clearly drawn. Many Miltonic humanists who advocate brotherly concern wish to assure it by strict, Hobbesian controls. In their concern for public welfare, they would, by seizing undelegated authority, exercise their own will and judgment and force others to follow at whatever cost to individual conviction. Many carefully constructed welfare schemes have proved to do more harm than good because the nature of man was ignored in the planning.

Conclusion

The problems persist, the nature of man remains a mystery, and humanity continues to suffer. If management hopes to manage, if it expects to exercise the authority it holds—and even, it seems to hold on to that authority—then some intelligent and realistic assumptions must be made about the nature of man. The lessons from history are clear: society forces responsibility on management. At the same time, society lessens the authority of management whenever it forces management to assume responsibility. Since responsibility without authority is an untenable situation, management in all areas—industry, labor, government, education, and so forth—must assume social obligations and proceed to find ways of meeting them. The place to begin is the acknowledgement that the problem of the human condition is inseparable from that of the nature of man. In setting up institutions and in dealing with people, *we* should consider the complex nature of man and arrange for checks and balances accordingly.

ABSTRACTS of MASTER'S THESES and SPECIALIST IN EDUCATION PROJECTS

Baraff, James A. (MA, Psychology, August, 1973)

UNCONVENTIONAL HEALING OF GROUP *C STREPTOCOCCUS INFECTION IN WHITE MICE: A COMPARISON OF PRAYER EFFECTIVENESS UNDER TWO CONDITIONS*

This study was designed to research some paranormal aspects of unconventional healing. Previous research has concerned itself only with present (laying on of hands) paranormal healing. This study utilized both present healing by an individual and distant healing (healer does not see patient) by a group.

White mice were used as "patients." Three groups of mice were infected equally with an LD50— concentration of the pathogen *Streptococcus C.* All groups were kept together in an identical environment. One group (Group S) received present healing treatments. One group (Group I) received distance healing treatments. A control group (Group O) received no treatment. A research assistant, blind to the coding of the groups, counted the number of dead animals daily during the course of the infection (8 days). A chi square was computed to determine any significant differences between the three treatment levels.

No significant differences were found between the three treatment levels. It was concluded that in this study no evidence of paranormal healing was evident. However, interviews with members of the distant prayer healing group, and the present healer, revealed negative emotional reactions which may have affected the results of the study. These reactions were not revealed until the completion of the study when final interviews were conducted. Specifically, the reactions were: 1.) the question of the morality of infecting laboratory animals for use as subjects; 2.) personal antipathy by some group members toward the subjects (mice); 3.) severe personal stress felt by the present healer due to family difficulties throughout the duration of the study.

It would be desirable for future investigators to control for personal variables affecting the healers, and to consult with the healer or healers regarding research design.

Baxley, Jr., Brett L. (MA, Psychology, June, 1973)

TREATMENT TECHNIQUES FOR HEROIN ADDICTION

Problem: Patients who are addicted to heroin are currently being treated for their addiction by hospitals, clinics, inpatient treatment facilities, and persons in private practice. Inpatient and outpatient treatment is given. Many different methods of treatment are being used to treat these patients including drug therapy, various kinds of psychoterapy and religious appeals. These are traditional kinds of treatment. Newspapers and magazines, from time to time, report on new methods of treatment such as medication and acupuncture. Varied reports of success are given for these new methods with little or no real evidence being offered for verification of the claims.

Many addicts receive treatment for their addiction and still continue to use heroin. Their case records show that they received certain treatments and were discharged from the treatment program, but they seldom contain a statement of what happened to the patients after treatment. The prescribed methods of treatment are determined as proper by the person prescribing them and the patient is seldom asked to give his opinion of the treatment methods. Value of treatment is usually determined by persons other than the patient.

The study reported here was made to find out how heroin addicts, who had given up the use of heroin, felt about the treatment methods they had experienced in their prescribed program of treatment, and which methods of treatment they felt were the most valuable for treating heroin addiction.

Method: Five patients who had not used heroin for periods of up to 20 months, and who were currently enrolled in a resident treatment program, were used in the study. They evaluated methods of treatment used in previous unsuccessful programs of treatment they had undergone. They also evaluated 18, non-medical, therapeutic techniques and experiences used in their current program of treatment. The subjects evaluated these items in terms of how the techniques had helped them as well as how valuable they felt the items were for use in other heroin treatment programs.

Conclusion: The study found that medical methods of treatment for heroin addiction were not effective. Methadone maintenance programs and other chemical therapies were particularly ineffective. Volunteer drug abuse programs were found to be ineffective and it was shown that compulsory treatment is required for successful programs. The particular kinds of psychoterapies used in treatment programs for heroin addiction were found to be not critical, as most seem to be equally effective. The techniques and experiences found to be most valuable in treatment of heroin addiction were those which helped the patient improve his self esteem and physical body awareness.

Bell, Mae C. (MA, Guidance and Counseling, December, 1973)

A COMPARISON OF RESPONSES ON GUIDANCE SERVICES IN GEORGIA, CLAYTON COUNTY, AND BABB JUNIOR HIGH SCHOOL

This descriptive study investigated the perceptions held of guidance services by four populations: students, teachers, administrators, and counselors. The Georgia Guidance Services Inventory was the instrument used to determine noticeable differences in state, system, and local school responses. The populations responded to sections on what is occurring and what should be occurring. Mean factor scores were examined. Findings indicated a need for more interpretation to teachers and students on state, system, and local level. These two populations responded in a similar manner as did administrators and counselors. Local school administrators exhibited noticeable differences in most factors.

Bledsoe, Mildred Rowe (MA, Elementary Education, August, 1973)

A COMPARISON STUDY OF GLOBE AND MAP SKILLS AS LEARNED FROM A UNIT ON SKILLS COMPARED WITH A GROUP USING MAP SKILLS ONLY AS NEEDED IN OTHER UNITS OF WORK

This research study was designed to report and compare findings of a research study which was to investigate scientifically the value of teaching globe and map skills in a unit compared to teaching the skills as needed in context from the beginning of the school year until the delayed posttest was given.

Subjects used in the study were students of two seventh grade classes with an IQ range of 80 to 121. Both the experimental and control groups contained twenty-six students. The subjects involved in the study were from two separate schools, which are located in a rural area. The subjects of the experimental group and the comparison group were similar in age, sex, and economic status.

A teacher-made test was used in the study. A total test score of fifty was possible with each correct response receiving one point. The same test was administered for each testing period.

The pretest over globe and map skills was given to all students involved in this study on November 27, 1972. A posttest was given to all the students on February 2, 1973 when the experimental group completed the unit of globe and map skills. After a two months period, the delayed posttest was administered to subjects in the experimental and comparison groups.

Three null hypotheses were tested by Analyses of Covariance (ANOCOVA) and the fourth by the paired t test. The four null hy-

potheses were rejected at the .05 level of confidence. The experimental group scored significantly higher on the posttest and the delayed posttest. The fourth hypothesis was rejected because the experimental group lost retention significantly at the .05 level, evidently because the use of skills had not been reinforced.

The conclusion was that a unit of globe and map skills should be taught seventh grade students early in the school year and the skills should be reinforced throughout the school year. The students would be better prepared to use these skills in high school, college, and the remainder of their adult lives.

Bottoms, Jr., David H. (MA, English, August, 1973)

ROMANTIC INFLUENCES ON THE POETRY AND CRITICAL THEORY OF HENRY TIMROD

Henry Timrod was, perhaps, the first American who attempted to resolve the theoretical differences between the poetic schools of Edgar Allan Poe and William Wordsworth. Timrod's early influences were solely toward the musical aspects of poetry. As Timrod matured and became acquainted with the poems of William Wordsworth, he drastically altered his concept of poetry and sought to make truth, not music, the goal of his poems. He was quick to recognize the shortcomings of both theories of poetry and became concerned with creating an all-encompassing theory of verse. He believed, however, that for any theory of poetry to be workable, it must not exclude even one great poem. The major fault of Poe and Wordsworth was the narrowness of their theories. Timrod believed that a real theory of poetry must include both the musical and the philosophical aspects of poetry. In developing his all-encompassing theory, he pointed to Alfred Tennyson as a living example of a poet with vision broad enough to employ the best of both poetic theories successfully.

Though critics have found small traces of Keats, Shelley, Arnold, and Browning in the poetry of Timrod, the influence of these poets was minimal and failed to effect the development of Timrod's poetic theory. This thesis will trace the development of Timrod's critical theory through his initial influences toward the musical aspect of poetry, the change of concept Timrod experienced from an acquaintance with the poetry of William Wordsworth, and the critical solution he found in the poetry of Alfred Tennyson.

Carmichael, Leon Clyde (MA, Guidance and Counseling, August, 1973)

NINTH AND TENTH GRADE PUPILS' OPINIONS OF COUNSELING SERVICES AT SYLVAN HIGH SCHOOL

The counseling services at Sylvan High School have been evaluated twice during the last six years. In 1967-68 the evaluation was part of a school-wide evaluation required by the accrediting association. In 1973 a follow-up evaluation to the 1967-68 study was made, in which it was recommended that the counselors be aware of the changing needs of the students—both academic, vocational, and personal. This recommendation indicated the need for a survey of pupils' opinions of the counseling services.

The purpose of this study was to obtain and analyze ninth and tenth grade pupils' opinions of the counseling services offered. The categories used in this pupil evaluation were the following: orientation and general information, occupational information and counseling, educational information and counseling, and personal problems and counseling. The study was limited to ninth and tenth grade pupils, since the investigator was assigned to these grades.

It is hypothesized that counseling services at Sylvan High School are not reaching the majority of ninth and tenth grade pupils.

A stratified sample of 78 pupils—43 ninth and 35 tenth—comprising about 20% of these two grades—was selected and administered a 32-item questionnaire (Appendix). Items 1-20 covered the four categories above. Items 21-31 dealt with possible counselor services. Subjects were asked to check "yes," "no," or "not sure." Item 32 was open-ended and asked the pupil to list additional ways the counselor could be of assistance. The questionnaire was administered in a group setting in order to gain a higher degree of cooperation.

The responses to the questionnaire were tabulated and converted to percentages. The data were presented under the following headings:

(*a*) Distribution of respondents according to grade and sex
(*b*) Orientation and general information
(*c*) Occupational information and counseling
(*d*) Educational information and counseling
(*e*) Personal problems and counseling
(f) Possible counselor services
(*g*) Ways in which counselors could be of more assistance to students
(*h*) Mean percentages of the four categories of counseling services

The results of the study led to the following conclusions:

(*a*) A majority of the students seemed to know the counselor and about the counseling program, and had had at least one conference with him a year.

(*b*) The students felt rather definitely that occupational information

and counseling was lacking.

(*c*) Most of the pupils reported that they had taken an intelligence or achievement test but that they had not received an explanation of the results.

(*d*) A majority of the pupils indicated that the counselor had helped them plan their high school program, but they did not feel that they had received adequate information about post-high school education.

(*e*) Pupils' concern about personal problems (44%) was about equivalent to the percentage of pupils saying they had received help from the counselor (40%).

(*f*) Most of the students reported satisfaction with the help received from the counselor, although only 38% felt that some change in their thinking had resulted.

(*g*) In connection with possible counselor services, a clear-cut majority favored help with course selection, occupational information, and school-related problems; a little over half (56%) felt that counselors should help with moral and religious problems.

(*h*) Of the 41 suggestions given in answer to the open-ended item, 18 related to educational planning and eight suggested help with various school problems.

Douglas, Judy C. (MA, Secondary Education, August, 1973)

A COMPARATIVE STUDY OF ACHIEVEMENT IN AND ATTITUDE TOWARD AMERICAN HISTORY USING THE TRADITIONAL LECTURE DISCUSSION AND INQUIRY METHODS

Using two classes of twenty-seven each this study attempted to discover if the use of the inquiry approach of instruction would result in a significant gain in achievement and attitude as compared with the use of the traditional lecture-discussion method. Null hypotheses were used.

The two classes were determined to contain no significant differences in either achievement nor attitude through the t-test for the difference between means computed on pretest scores from form A of *Reemer's Any School Subject Survey* and test four of the *Cooperative Topical Tests in American History Series*. A nine week treatment followed with the control class taught by the traditional lecture-discussion method and the experimental class taught by the inquiry method. At the end of the treatment form B of *Reemer's Any School Subject Survey* and test four of the *Cooperative Topical Tests in American History Series* were administered as post tests. Appropriate statistical treatment found no significant difference in attitude but a significant difference in achievement at the .05 level of significance. Hypothesis one was rejected. Hypothesis two was accepted.

Fidler, II, Leland Willis (MA, History, August, 1973)

A RE-EXAMINATION OF OPPOSITION TO IMMEDIATE SECESSION IN GEORGIA, 1860-1861

From the moment Georgia seceded historians have argued over the nature of the secession movement. Was secession a popular movement, or was secession the result of a conspiracy of Southern leaders? The purpose of this work is to determine the strength of the group opposed to secession.

To understand Georgia's relations with the Union in 1860 and 1861, it is helpful to look at Georgia's stand in 1850. In this year of crisis, Georgia was a leader among Southern states in accepting the Compromise of 1850. During the 1850's some Georgia political leaders began changing their positions regarding secession. The presidential campaign of 1860 influenced Georgians as they thought of secession. Moreover, the campaign waged in electing delegates to the secession convention in 1861 was significant for understanding the state's final decision.

I have tried to use both primary and secondary sources in this project. Although I have used no manuscripts, I have used many newspapers, diaries, and collected works of individuals from antebellum and Civil War Georgia. County histories were used to try to determine the opinion of the "little men" in each county regarding secession. "Unionism in Georgia, 1860-1861," an unpublished thesis by Ellen Louise Sumner, was a valuable aid because of its thorough bibliography.

After investigating the evidence it appears that a substantial minority of Georgians opposed secession in 1861. Numbers and percentages are virtually impossible to determine, since in many cases differences between "Unionists," "Cooperationists," and "Secessionists" are semantic. Although I do not subscribe to a "conspiracy thesis," it seems that the success of the secessionists was due to the fact that their "party" included more of the state's political leaders. Moreover, their campaign was more vigorously waged and more easily argued.

Gibson, Elizabeth Josephine (MA, Secondary Education, August, 1973)

A STUDY OF SELECTED FACTORS WHICH AFFECT THE REGISTRATION OF STUDENTS FOR SOCIAL STUDIES CLASSES AT OSBORNE SENIOR HIGH SCHOOL IN COBB COUNTY, GEORGIA

This study examined the attitudes of students toward social studies as compared to English, science, and math, and also examined selected factors which affected registration for social studies courses. There were 814 students from Osborne Senior High School in the group study. Slightly more than half the boys and girls showed favorable attitudes

toward social studies. Social studies ranked third in the order of preference of boys and last among girls. Teacher recommendations, liking the teacher, and graduation requirements were significant factors affecting registration but counselor recommendations had virtually no effect.

Glover, Inez Taylor (MA, Elementary Education, June, 1973)

A METHOD TO PROVIDE INDIVIDUAL HELP FOR A READING CLASS

This study was designed to provide experimental data on the effectiveness of students helping younger students in reading on an individual basis. The research design of this study was the pretest posttest control group design. Half of a second grade underachieving reading class was randomly chosen for the experimental group. These 16 experimental subjects were paired with 16 fourth grade achieving readers for a 15-minute daily help session for a period of 6 weeks. These help sessions were held in the fourth grade reading class during the reading period for both groups involved. The help sessions involved assistance with assigned seatwork and other individual help with reading.

The control group consisted of the 16 second grade underachievers that remained in the reading class from which the experimental group was selected. They received no student help with seatwork but were paired with the remaining fourth graders for certain play activities.

Alternate forms of the California Reading Test were administered as pretests and posttests. A t test was computed to ascertain any significant statistical differences between the mean gain of the 2 groups. These gains were measured in 3 areas: (1) Total reading, (2) Vocabulary, and (3) Comprehension. The 3 null hypotheses that there would be no difference between gains of the 2 groups were not rejected.

While there was no measurable statistical mean gains which could be evidenced on the t test, it should be noted that the experimental group made raw score gains in each area tested over the gains of the control group. The raw score gain in comprehension was nearly twice as great as the gain of the control group in this area.

Hardy, Jr., James Eldred (MA, Guidance and Counseling, August, 1973)

THE EFFECTS OF GROUP COUNSELING WITH SOCIALLY WITHDRAWN SEVENTH GRADE STUDENTS

A counseling group composed of quiet, shy, and withdrawn seventh grade students was set up at Lindley Junior High School for the purpose of helping these students learn the skills needed for meeting new people

and for expressing ideas and thoughts openly without fear of rejection. Through the use of group discussions, games, puzzles, and filmstrips, the students were able to look at themselves and the others around them and openly discuss their ideas and thoughts. Although there was not a significant change in the self concept of the group, there was a significant change noticed by the classroom teachers in the interaction of the group members in classroom activities and in the making of new friends.

Heard, Philip Spurgeon (MA, Secondary Education, June, 1973)

A COMPARISON OF DECLARED SOCIAL SCIENCE MAJORS AND DECLARED BEHAVIORAL SCIENCE MAJORS WITH RESPECT TO PERSONALITY FACTORS

This study has considered whether there is a difference between the personalities of social science students and behavioral science students. Samples were selected from history, political science, psychology and sociology students who took the Sixteen Personality Factor Questionnaire in Education 201 classes at West Georgia College. Statistical treatment found that there was a significant difference at the .05 level on Factors B (low mental capacity—high general mental capacity), C (affected by feelings—emotionally stable), G (expedient—conscientious), H (shy—venturesome), M (practical—imaginative), O (self-assured—apprehensive) and Q1 (conservative—experimenting).

Hoomes, Eleanor (Specialist in Education, Secondary Education, December, 1973)

THE RELATIONSHIP BETWEEN GRADES GIVEN BY ENGLISH TEACHERS AND LANGUAGE AND NON-LANGUAGE ABILITY AS MEASURED ON THE CALIFORNIA SHORT FORM TEST OF MENTAL MATURITY AND THE RELATIONSHIP BETWEEN GRADES GIVEN BY ENGLISH TEACHERS AND AGE, SEX, AND RACE

The purpose of this study was to determine the relationship between teacher-given English grades and language ability as measured on the California Short Form Test of Mental Maturity and between teacher-given English grades and non-language ability as measured on the California Short Form Test of Mental Maturity. A correlation technique, using the 0.05 level of confidence, was used to determine the relationship between the treatment variable (English grades) and the control variables (language and non-language ability scores). In addition, the relationship between English grades and age, sex, and race was observed.

A group of seventy-five Junior English students at Bowdon High School in Carroll County, Georgia, was used as the population. The findings showed a positive relationship between English grades and language ability as measured on the California Short Form Test of Mental Maturity and between English grades and non-language ability as measured on the California Short Form Test of Mental Maturity. In addition, there were positive relationships between English grades and age and between English grades and sex. The relationship was negative between English grades and race.

Jackson, Ruth Aldridge (Specialist in Education, Elementary Education, June, 1973)

A STUDY TO COMPARE THE USE OF GAMES AND ACTIVITIES VERSUS NO GAMES AND ACTIVITIES IN THE INSTRUCTION OF GEOMETRY

The study was an attempt to determine any differences in achievement and attitude between two groups of students, who were taught the same unit of geometry by two different methods.

During the six-weeks period from February 5, 1973 through March 16, 1973 two fifth grade arithmetic classes at Alabama Street School, Carrollton, Georgia were taught the same unit of geometry by the same teacher. One group of thirty-one students became the control group, which was taught by the traditional approach of teacher demonstrations, student demonstrations, and practice through drill. The other group of thirty-one students became the experimental group, which was taught as the control group, but with the addition of games and activities. Both groups used as the basic text, *Modern Mathematics Through Discovery 5*, published by the Silver Burdette Company.

The grade level in mathematics of the two groups was compared by an examination of the scores attained on the mathematics section of the Iowa Tests of Basic Skills. The mean comparison for the two groups was third grade seventh month. Hence the two groups were obviously equivalent with respect to grade level in mathematics.

A pretest over concepts of geometry and a preattitude scale over arithmetic in general and geometry in particular were given to all students involved in this study. At the end of the six-weeks period, they were given the same tests as posttests. Fisher's "t" technique was used to test the significance of differences between the two groups.

There was no significant difference in the mean gain between the control group and the experimental group. The obtained *t* value in concepts of geometry was .065, in attitude toward arithmetic was 0.100, and in attitude toward geometry was — 1.174. The *t* values required for significance were 1.714 at the .05 level and 2.500 at the .01 level of significance.

The conclusion was that there was no significance in the mean gain for the subjects being compared by this study. There was no significance in the mean gain pertaining to attitude. Students achieved as much concerning concepts of geometry by the traditional method of teaching without the use of games and activities as those students, from the same population sample, achieved with the addition of games and activities.

Jenkins, Jane Luck (Specialist in Education, Elementary Education, August, 1973)

DETERMINING THE EFFECTS OF AN INDIVIDUAL TUTORING PROGRAM ON DISABLED FIFTH GRADE READERS

This study was designed to determine the effectiveness in reading vocabulary, reading comprehension, total reading achievement and in attitude toward reading as a result of a structured tutorial reading program.

A purposive method of sampling was employed to select 35 subjects from the two fifth grade teams. The experimental and control groups consisted of subjects who were reading approximately two years below grade level as determined from the pupils' Cumulative Reading Records, The McMillan Basal Reading Program. Eighteen subjects in the experimental group received assistance beyond their regular reading instruction. Seventeen subjects in the control group did not receive additional help.

A structured tutoring program was conducted for nine weeks with college students enrolled in Education 351, West Georgia College, How to Teach Reading, working with their subject on an individual basis twice a week for one hour.

For evaluation purposes, alternate forms of the California Reading Test and the same form of the Intermediate Reading Index were administered as pretests and posttests. A t test was computed to ascertain any significant statistical differences between the mean gain of the two groups in reading vocabulary, reading comprehension, total reading achievement and in attitude toward reading. The four null hypotheses stated that there would be no significant differences between the two groups.

From the statistical computation which was used to test the four hypotheses, there was no significant differences shown in reading vocabulary, reading comprehension and in total reading achievement at the .05 level of confidence therefore these three hypotheses were not rejected. The fourth hypothesis, attitude toward reading, showed a significant difference at the .05 level of confidence according to the t value, therefore the fourth hypothesis was rejected.

Kaufman, Jr., Gus B. (MA, Psychology, June, 1973)

CULTURAL MEANINGS OF THE TRICKSTER FIGURE

The objective of this study is to begin to define a cultural and psychic force in man to be called the trickster figure or archetype, to give some idea of its variety and universality, and to show its importance for individual and cultural well-being.

The thesis is developed that the trickster is closely related to the animal, the primitive, and the unconscious, that man has usually felt conflicting needs to suppress or to recognize and express these parts of himself, and that the conscious expression of these needs is closely related to change and growth processes.

Awareness is proposed as a key variable in determining whether trickster behaviors are constructive or destructive for an individual or a society. In the explication of the psychological nature of the trickster figure, cultural ambivalences regarding change, wandering, aggression, sexuality and the body are considered as they are embodied in taboos, customs, and myths.

Current American examples of expression or liberation of these forces, and the possible benefits and dangers of this are also considered.

Finally, the author considers the significance of the trickster theme in his own life; he creates and explicates a personal trickster myth.

Legge, Thomas J., (Specialist in Education, Secondary Education, August, 1973)

A STUDY OF THE RELATIONSHIP BETWEEN SELECTED VARIABLES AND INTEREST IN SOCIAL STUDIES AMONG HIGH SCHOOL STUDENTS

The problem of this study was to determine if there is any relationship between intellectual variables of intelligence quotient, grade point average, and reading ability and the non-intellectual variables of parents' educational level, and the students' sex and a student's interest in social studies.

The subjects used in the study were sixty high school students. Thirty of these students were classified as those with low interest in social studies and thirty of these students were classified as those with high interest in social studies. Analysis of variance and correlations were run to determine if there was a significant difference between the two groups.

The following conclusions were drawn:

A. With reference to the variables of sex and interest in social studies, there was indication that male students had slightly more interest in social studies than female students.

B. Intellectual variables had no significant relation to interest in

social studies.

C. Non-intellectual variables had no significant relation to interest in social studies.

Lemmon, Elizabeth Bullard, (Specialist in Education, Guidance and Counseling, August 1973)

EFFECTS OF GROUP COUNSELING UPON ATTITUDES AND SELF-CONCEPTS OF MINORITY STUDENTS IN A MIDDLE SCHOOL

The purpose of this research was to determine if the self-concepts and attitudes of nine black boys and seven black girls in a middle school could be changed in twelve group sessions. The attempt was made to develop the ego strength of the students. This was done by stressing and reinforcing the positive aspects of each student's personality until he saw himself as worthwhile. It is suggested that group counseling, for more than the twelve sessions given these students, may be a means by which the minority student can receive aid in developing better self-concepts and attitudes.

Lobovits, Francine Segal (MA, Psychology, August, 1973)

A CLINICAL INVESTIGATION INTO MUTUAL HYPNOSIS AS A MEANS OF EXPANDING CONSCIOUSNESS IN AN INTIMATE MALE-FEMALE RELATIONSHIP

The purpose of this study was to investigate the potential of mutual hypnosis as a technique for facilitating unity in a married couple. By "unity" I am also referring to the expansion of consciousness: for the male, by integrating feminine principles into his psyche, and for the female, the integration of masculine principles.

There were three different mutual hypnosis sessions, at each of which a different symbolic text was read to the subjects. The texts emphasized archetypes and symbols of the union of male and female energies.

The sessions were successful though not dramatic. The subjects could not single out any direct effects of the sessions in their daily lives, but, they were able to relate easily to the symbols used, and felt the experiences to be highly meaningful.

McLendon, Larry Leonidas (MA, Psychology, June, 1973)

ADDITIONAL NORMS ON THE HARVARD GROUP SCALE OF HYPNOTIC SUSCEPTIBILITY, FORM A

Normative data were collected on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS) from a sample of students at West Georgia College, Carrollton, Georgia. The results are compared with the findings of the normative studies done at Harvard and the University of California in order to determine if the normative data reported in these studies are broadly representative of American college students.

The HGHS was administered by means of a tape-recorded standardized induction procedure to 226 undergraduate and graduate students in volunteer and non-volunteer groups. An analysis of variance was conducted on the raw data collected from the sample. The Kuder-Richardson reliability co-efficient and item-pass percentages were calculated.

The findings lend support to the previous normative studies. There are discrepancies between the means of the samples studied, but these may be explained by the nature of the sample compositions rather than by weaknesses in the scale itself.

A minor rearrangement of the order of two items in the scale is suggested, as well as deletion of an ambiguous suggestion in the induction procedure.

Moyers, Ruth L. (Specialist in Education, Guidance and Counseling, August, 1973)

THE ROLE OF A READINESS CLASS IN THE DEVELOPMENTAL PLACEMENT PROGRAM OF NORTON PARK ELEMENTARY SCHOOL

A description is given of the role of a readiness class in the developmental placement program at Norton Park Elementary School, Smyrna, Georgia. It presents an educational plan which allows for more individualized instruction based on the philosophy that all children do not develop at the same rate. Materials are presented which help in developing certain skills which are prerequisites for reading success. The children in the readiness class are those who are not developmentally ready for formal instruction. By grouping these children, provision is made for the kinds of experiences and activities suited to their present level of development.

Peterson, W. Martin (MA, Psychology, August, 1974)

THE EFFECTS OF INSTITUTIONALIZATION ON THE CONCEPTS OF TRUST AND INTERPERSONAL RELATIONSHIPS OF THE MILDLY RETARDED ADOLESCENT MALE

The mildly retarded institutionalized male has entered a state of basic mistrust, both of himself and his environment. Institutional life has removed many of the choices they, as humans, have by supplying objective treatment and rehabilitation in its place.

Both the retardate and worker have entered an "it-it" relation. Thus, each has objectified the other. Objectification has occurred to the extent that the mentally retarded adolescent male does not have a concept of trust, nor does he enter interpersonal relationships.

The information presented in this thesis represents my attempt, within an institutional setting, to reintroduce and foster self-evaluation and interpersonal trust relationships.

Prickett, Jr., Harvard Pittman (Specialist in Education, Secondary Education, August, 1973)

A STUDY OF FACTORS THAT INFLUENCE STUDENT CHOICES OF SOCIAL STUDIES COURSES AT DOUGLAS COUNTY COMPREHENSIVE HIGH SCHOOL

This study has considered factors that influence student choices of social studies courses. Samples were selected from English classes at Douglas County Comprehensive High School during Spring Quarter of 1973. Three hundred students were given H.H. Remmer's scale, "A Scale to Measure Attitude Twoard Any School Subject," Form A. Of these three hundred students, sixty were selected for the sample consisting of the thirty students who scored highest in interest in social studies and the thirty who scored lowest in interest in social studies. These students were compared on the following variables: intelligence quotient, grade point average, family economic background, home reading materials, educational level of the mother, educational level of the father, reading ability, and sex. Means, standard deviations, and t-scores were derived for each factor. Statistical treatment found that students with high interest in social studies appear to have higher intelligence quotient scores, higher grade point averages, higher family incomes, more reading materials in the home, higher educational levels of parents, and higher reading scores than do students who have low interest in social studies.

Raulston, M. Greer (Specialist in Education, Secondary Education, August, 1973)

A LATIN AMERICAN HISTORY OUTLINE FOR SENIOR HIGH SCHOOL

This course is designed to meet the needs of accelerated students on the senior high school level who plan to attend college. It is structured for presentation under the quarter system.

The first quarter surveys the geography, the pre-Colombian era, the Spanish and Portuguese conquests, and the colonial period.

The second quarter deals with the various independence movements and each country's struggle for stability.

The third quarter considers the strong-arm rule of dictators and the development of contemporary nationalism.

Rowe, Helen Hutson (Specialist in Education, Elementary Education, August, 1973)

A COMPARATIVE STUDY OF THREE METHODS OF INSTRUCTION IN TEACHING DIVISION TO FIFTH GRADE STUDENTS

A study was conducted to compare the gain, if any, in arithmetic achievement in division of one group taught individually or in small groups (Group A), another group taught by the class-as-a-whole approach (Group B), and one group taught by a combination of these approaches (Group C). There were thirty-three students in Group A, thirty-one in Group B, and thirty in Group C. All classes were heterogeneously grouped and taught by the investigator.

Three null hypotheses were tested to determine if significant differences existed between the groups. The t test was used to test the hypotheses. The findings indicated that no significant difference was found between the groups, but the class-as-a-whole approach was much more effective than the individualized approach, but it was not significantly more effective than the method which used a combination of approaches. Recommendations for further study were included.

Sanders, Marian Elizabeth (MS, Physics, August, 1973)

A MOSSBAUER STUDY OF Fe-Ni-Al ALLOYS

For samples of atomically disordered fcc Fe-Ni-Al, a study of their magnetic properties was done using room temperature Mössbauer spec-

troscopy. The samples used consisted of $(Fe_xNi_{i-x})_yAl_{1-y}$, where x equaled 0.167 with y equaling 1.00, 0.90, 0.85, and 0.95 for one series of alloys and x equaled 0.450, 0.333, 0.167, and 0.050 with y equaling 0.10 for the second series used.

The main results indicated that the addition of paramagnetic Al and ferromagnetic Ni decreased the hyperfine field, H, of ferromagnetic Fe. Ni and Al were found to have different effects on the spectral lines of the alloy. The greater the Al concentration in a Fe-Ni-Al alloy the larger the energy spread (or atomic disorder) in the Mössbauer spectral lines, while the dependence on Ni showed a constant amount of disorder. The third result was an anomaly at $(Fe_{.167}Ni_{.833})_{.90}Al_{.10}$, which could have been due to atomic ordering. However, this sample and all others were fast quenched from 1200°C (thermally disordered) and cold worked (mechanically disordered).

For alloys with $x=0.167$, the quadrupole splitting of the spectral lines was found to be directly related to the Al concentration in the same manner as H. On the other hand, the quadrupole splitting and isomer shift for $y=0.10$ were inversely related to H.

Savage, Vince (MA, Psychology, December, 1973)

CAMERAS BETWEEN PERSONS

The phenomena of experiencing one's self and one another visually typically engenders considerable feeling or affective processes which normally are not understood and often are unnoticed. This thesis explores the intrapersonal and interpersonal feeling processes present in situations of two persons and a camera. This discourse is not primarily concerned with photographic process or physiology of vision, but rather is a critical inquiry into the ordinary approaches to photographing persons and deals with the emotional aspects of experiencing one's self visually. As an alternative way of being and as a possible solution to problems of cameras between persons, some theoretical postulation and demonstration is suggested as to how accelerating personal growth can affect such phenomena to happen differently. Moreover, it is an entreaty for authentic involvement with one's self and other persons and for an artist's integrity in visually experiencing one another.

Shaye, Seymour (MA, Psychology, June, 1973)

TOWARD A THEORY OF POSTURAL IDENTIFICATION: A COMPARISON OF EAST AND WEST, WOMAN AND MAN THROUGH THE POSTURES OF SITTING AND STANDING

The manner in which man identifies with various postures has profound implications for the life that he lives. If he chooses to live an

upright life to the exclusion of other postures, as he has done in the West, then he will manipulate nature and others to meet his own personal needs. If he chooses to identify with horizontal postures, as he has done in the East, then he will hesitate to alter his relationship with nature.

The meaning of an *upright* postural world is distance and manipulation of that world. The meaning of a *horizontal* postural world is closeness and acceptance of the world as it is. If we are to grow into full human beings, then we will have to inhabit all postures. The integration of these two postural worlds is necessary for growth. Without living in both worlds we neither understand nor accept what is not found in our world. If our communication is aimed at bringing us closer together, then for it to be effective, we must be able to live in many different worlds. In order for man to meet man, he must inhabit both horizontal and vertical postural spaces.

Smith, Deborah Sherre (MA, Psychology, August, 1973)

INSTITUTIONALIZATION: A SOURCE OF FRUSTRATION AND ALIENATION

The question which is dealt with in this paper is that of the mental institution and more specifically, its functions, goals, and effectiveness in the treatment of mental illness. The material presented has been gathered from two main sources: (1) my own empirical observations based upon five years' work in a mental hospital and (2) the research and findings of others. The main objective of this paper is twofold. The first is to show that a mental institution is an unnatural environment and is a source of frustration and alienation which does little to aid a person in learning how to function adequately in a community. The second is to explore possibilities for more effective treatment of psychological disorders.

Smith, Jimmy L. (Specialist in Education, Secondary Education, August, 1973)

INTRODUCTION AND IMPLEMENTATION CAREER EDUCATION (K-6)

The elementary school teacher and administrator must make the concept of Career Education into an effective program for all children. Realistic planning during the formative years will cause the formation of attitudes and habits which will carry over to the adult life of the child. Provisions should be made to give every elementary child the oppor-

tunity to explore the world of work and to relate his own interests to potential careers.

The grades K-6 are an excellent time for introducing the Career Education concepts and providing for exploration of the work world. The school itself must be so organized that full support is given to the career program. Bottoms and Matheny suggest that the following objectives be utilized in the establishment of such a program.

1. Students learn to know themselves in their immediate environment and begin to relate to the broader environment beyond family and school.
2. Students develop identifications with workers, fathers, mothers, and other significant persons.
3. Students learn and relate manual and mental skills in the performance of a number of work tasks.
4. Students acquire satisfaction in the task of learning itself.
5. Students learn to get along and work with peers. These objectives should be a viable portion of every school's central purpose. (Bottoms, 1969)

Starnes, Eddie (Specialist in Education, Elementary Education, August, 1973)

A STUDY TO MEASURE MATHEMATICS COMPETENCE UTILIZING THE OBJECTIVES IN *MATHEMATICS FOR GEORGIA SCHOOLS*

A multiple-choice test was constructed utilizing the objectives in the state mathematics guide for elementary schools. The test was administered to all sixth grade students in the Polk School District. The two major questions in the study were: (1) Can a reliable test be constructed utilizing the objectives in *Mathematics for Georgia Schools*? (2) To what extent are sixth grade students accomplishing these objectives?

The split-half method was used to determine the reliability coefficient, .88, which was significant at the .01 confidence level. A histogram showed that of the 540 students in the study, only thirty scored above seventy per cent. There were 276 students who scored less than fifty per cent on the test. On this test, the students demonstrated the highest level of competency in those mathematical concepts related to relations and functions. They scored lowest in those concepts related to probability and statistics. Recommendations for further study were included.

Whitt, Michael Emmett (MA, Psychology, August, 1973)

INTROSPECTION: A PRECURSOR OF EXPANDED CONSCIOUSNESS

Each individual finds himself submerged within his own subjective relationship with existence. This unique position places man at the center of a variety of tensions which assist and diminish him as he attempts to fulfill his life. There is an enormous variety of these tensions which each individual must face, and these tensions are usually perceived in the form of dichotomies. A few of these dichotomies are: subject-object, intellectual-emotional, rational-irrational, and scientific-humanistic. All of these dichotomies are contained within the human situation. The human situation, then, is somewhat of a predicament. This human predicament (i.e., being-in-the-world) can perhaps be better understood if one considers man as he relates to himself, to others, and to the world. Being human means that life calls into play all the resources of an individual. The manifestations of the tensions of our human predicament are sometimes direct, other times indirect; yet, to some extent, they continually are interacting with us. A basic underlying assumption is being made concerning man, i.e., that if an individual can partially realize the complex nature of himself, especially in terms of self-concept, identity, and attitudes, then the responsibility (no more nor less can be assumed) of one's attaining his own fulfillment, reaches the domain of possible outcome.

To be aware of the diversity, complexity, and multiple dimensions of oneself seemingly is a prerequisite for the aggrandizement of the individual. The primary goal of this thesis is to stress a more radical shift in the quality and quantity of one's own perspectives, with an emphasis on subjective attitudes concerning these views. The three major chapter divisions direct attention toward the perception of specific manifestations of being seen essentially as a complex, diversified, and multidimensional personality.

Wilkinson, Doris (Specialist in Education, Elementary Education, August, 1973)

A STUDY TO IMPROVE THE SUPERVISORY TECHNIQUES OF ELEMENTARY SCHOOL PRINCIPALS IN THE AREA OF READING/LANGUAGE ARTS THROUGH INVOLVEMENT IN AN IN-SERVICE PROGRAM

The purpose of this study was to improve the supervisory techniques of elementary school principals in the area of reading/language arts through involvement in an in-service program.

This study involved five elementary school principals of the Harris

County School System during the 1971-1972 and 1972-1973 school terms.

The Gates MacGinitie Reading Test (pretest) was administered to students in grades two through seven in October, 1971. These reading scores were compared with data obtained from the Gates MacGinitie Reading Test (post test) administered to students in grades two through seven in April, 1973.

An instrument was devised and utilized for measuring any change in the attitudes of a principal toward his supervisory role in the reading/language arts program.

The effectiveness of the principal is determined in part by his ability to improve instruction and his ability to furnish competent supervision. The most important work of the principal is the improvement of teaching in the school; therefore, his dominant function is supervision. The principals became involved in an in-service program that dealt specifically with supervisory techniques in the area of reading/language arts. Major topics of concern were: exploration of needs in a reading program, materials used in the reading/language arts program, study of reading test scores, needs of individual children, classroom visitation, and effective supervisory techniques.

In providing themselves with appropriate background information for the in-service program, the principals of Harris County (1) made a general survey of their reading program, (2) examined the present status in Harris County regarding reading/language arts and methods of teaching, (3) evaluated the existing reading/language arts program and methods of teaching in light of the philosophy and objectives, (4) identified areas in reading/language arts which needed special study and further development, and (5) appraised from time to time the effectiveness of the improvement program.

Because of the many variables, the writer was not able to make any significant statistical comparison between pre and post data obtained from the administration of the Gates MacGinitie Reading Test.

The following conclusions were drawn from the study:

1. There did appear to be a positive change in the attitude of principals toward their supervisory role in the reading/language arts program.
2. The principals had a positive change in attitude about their beliefs concerning the teaching of basal reading as a result of the in-service program.
3. Participants in the study now have a better understanding of a developmental reading program in the primary and elementary grades.
4. The effects of the study had begun to reach some of the classrooms in schools of the participants before the study had been completed; an increasing number of principals had employed successfully some of the supervisory techniques learned during class participation.

Addison, Ann Dendy (Specialist of Education, Guidance and Counseling, Spring, 1974)

A COMPARISON OF THE EFFECTS OF GROUP COUNSELING AND PEER TUTORING ON THE ACHIEVEMENT OF EIGHTH GRADE UNDERACHIEVERS AT LAKESIDE HIGH SCHOOL

Twenty-four eighth grade students at Lakeside High School were identified as underachievers. These were students who scored 100 or above on the Otis Lennon Ability Test and who made two or more D's or F's on their first quarter grade reports. These students were divided into three groups of eight. The counselor did not work with the control group. Another group was assigned peer tutors. A third group had group counseling once a week for the purpose of improving study skills and habits. At the end of the second quarter the change in grade averages from first quarter to second quarter of the three groups was compared. There was no significant difference in the change in grades of the three groups.

Addison, John Robert (Specialist in Education, Guidance and Counseling, Spring, 1974)

THE EFFECTS OF GROUP COUNSELING ON THE GRADES, ATTENDANCE AND PARTICIPATION IN SCHOOL ACTIVITIES OF NINTH GRADE MALE POTENTIAL DROPOUTS AT PEACHTREE HIGH SCHOOL

Sixteen male ninth grade students at Peachtree High School were identified as potential dropouts by their teachers and/or counselor. These students were randomly divided into two groups. The counselor did not work with the control group at all. The experimental group had group counseling fifty minutes once a week for ten weeks. At the end of ten weeks the change in grades, participation in school activities and attendance of the two groups was compared. The counseling group differed significantly from the control group in change in grades for second quarter. There was no significant difference in change in attendance or participation in school activities for either group, although two members of the experimental group joined a school activity second quarter while none of the control group did.

Burgess, Donnie E. (MS, Biology, Spring, 1974)

THE FINE STRUCTURE OF THE METACERCARIAL CYST OF *Posthodiplostomum minimum*

The cyst wall of *Posthodiplostomum minimum* (Trematoda: Diplo-

stomidae) consists of two main parts: 1) an outermost, cellular layer, about 3.0 u in thickness, composed of attenuated, endothelial-like cells containing granules, and interconnected by desmosomes; 2) an inner area with a membrane peripheral to a compact, hyalin-like layer averaging 1.46 u in thickness. The cyst is filled with a flocculant material. The tegument of the worm inside the cyst is spinous with vesicles near the surface. Beneath the limiting membrane of the tegument are circular and longitudinal muscle bundles and cells with numerous granules, cytoplasmic processes, inclusions, and baccilli-form bodies. Evidence suggests that the tegument and underlying cells are involved in active transport and synthesis of substances constituting the inner cyst wall.

Chapman, George W. (MA, Psychology, Spring, 1974)

SELF-DISCLOSURE AND PHYSICAL TOUCHING: AN INQUIRY INTO RELATIONSHIPS BETWEEN BLACKS AND WHITES

One hundred and twenty-four undergraduate students, black and white, male and female, between 18 and 23 years old, volunteered to answer Jourard's and Rubin's (1968) Bodily Touching Inventory, and Jourard's (1964) Self-Disclosure Questionnarie, to determine which racial group disclosed more and touched more, and any relationship between these modes of communication. Results indicate whites touch and disclose more than blacks, but the modes of communication in either racial group show little relatedness.

Givens, William Wyatt (MA, History, Spring, 1974)

THE CENTENNIAL HISTORY OF THE CARROLLTON (GEORGIA) BAPTIST ASSOCIATION

This thesis is a project dealing with local history in which the organization and the activities of the Carrollton Baptist Association will be examined. The Association is a voluntary group of missionary Baptist churches which are located primarily in Carroll County, Georgia. The Association was formed on October 24, 1874, and for one hundred years it has supported various mission activities both locally and in cooperation with the Southern Baptist and the Georgia Baptist Conventions. The local activity and the cooperation in wider activities is the scope of this thesis.

The primary sources consulted in the preparation of this thesis were: *Minutes* of the Carrollton Association for the one hundred years of its existence; *Minutes* of the Tallapoosa and Arbacoochee Baptist

Associations; *Minutes* of the Alabama and Georgia Conventions of Baptists; *The Christian Index*; the *Carroll Free Press*; and private letters.

The major secondary sources that were used were: histories of the Baptist denomination in Georgia by Samuel Boykin, B.D. Ragsdale, and James Adams Lester; articles on Georgia Baptist history by Robert G. Gardner and Emerson C. Proctor which were published in *Viewpoints* by the Georgia Baptist Historical Society; histories and an article dealing with basic Baptist principles; and two histories which deal with issues in the Southern Baptist Convention.

The plan of work which was followed in preparing this history of the Carrollton Association was chronological and was based on five distinct periods in the affairs of the Baptists of the area. The background and organization of the Association are covered in chapter one; chapter two examines the formative years from 1874-1897; in chapter three the relation of the Association to wider Baptist interests is the theme of the period from 1898 to 1910; the fourth chapter considers the struggle to promote mission work between 1911 and 1944; and chapter five surveys the progressive post-war years from 1945 until the present. In each period there is a consideration of the major issues which arose and an examination of relations with wider Baptist interests.

The basic conclusion of this thesis is that the Carrollton Association, operating on fundamental Baptist principles which are deeply rooted in the history of the denomination, has accomplished its work because it has had the general support of the majority of the individual Baptist church members. The Association has maintained a forward look and has been able to do those things which had the approval of the man in the pew whose voluntary support was always necessary for the success of any effort. The Association has been active, progressive, and cooperative with the wider efforts of Southern Baptists and Georgia Baptists.

Hollander, Steven Alan (MS, Biology, Spring, 1974)

A NUMERICAL TAXONOMIC STUDY OF SPECIMENS OF THE PELECYPOD FAMILY VENERIDAE

A numerical taxonomic study of specimens of the molluscan family Veneridae was performed, based on the cluster analysis methods of Sokal and Sneath. Only the calcified shells of organisms collected in Florida were examined. Biometric analysis was not fruitful. However, numerical analysis produced results consistent with current ideas of the family Veneridae.

Weck, Edna-Earle (MA, Psychology, Spring, 1974)

THE RELATIONSHIP OF SEXUAL FUNCTIONING TO INNER/OTHER DIRECTEDNESS

The objective of this study is to explore the relationship between sexual functioning and other-directedness. An experimental group of 12 subjects who were being treated for sexual dysfunction were compared, on the O-I scale of the POI, to 12 control subjects who were being counseled for non-sexual related problems. Statistical analysis indicated that the experimental group scored consistently more other-directed than the control group. The conclusion drawn was that psychosocial orientation, as measured by the O-I scale of the POI, is related to the incidence of sexual dysfunction.

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WEST GEORGIA COLLEGE

REVIEW

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THE *ILIAD* AND VEBLEN'S "QUASI-PEACEABLE BARBARIAN CULTURE"

by PAUL H. BOWDRE*

I suppose we have all had the experience (perhaps when we were trying to stimulate some discussion in class on the part of our students) of having somebody speak up and say "Sir, why do we have to read this stuff anyway—what's the point in it?" Something similar to this happened to me recently when we were about halfway through the *Iliad*. A male student slouched comfortably on the back row joined the discussion by remarking in a rather loud voice, "What's the use of learning about all these gods and goddesses and keeping up with one fight after another and who killed who? How are we ever going to use any of this stuff about a bunch of ancient Greeks?"

Well, there is a very brief, to-the-point answer for questions of this sort which is as follows: "If you don't learn it you won't pass this course, and if you don't pass this course maybe you won't graduate, and if you don't graduate maybe you won't get a desirable job and make a good salary." This usually takes care of the situation nicely, as it did in this case. For some reason though, the question of "relevance" having been raised about the *Iliad*, I found myself wishing I had taken time to present something better in justification of teaching it.

This matter of the relevance of the *Iliad* must have embedded itself in my subconscious, since a few nights later I had a rather disconcerting dream—a dream in which I found myself convicted of the crime of teaching that particular epic and standing before a jury consisting of several of my brighter students, while one of them reviewed the charges before sentence was passed. As well as I can recall the charges went like this:

> *Item 1:* that in an era recently marked by student protest of the Vietnam War through anti-war demonstrations, giving the "peace sign," boycotting Dow Chemical, and setting up agencies to give advice on avoiding the draft, you have the nerve to teach us a work of literature which glorifies battle and individual prowess, which dwells on the savagery of war, and which has as its heroes men with little to recommend them other than their fitness to make war
>
> *Item 2:* that to a generation which seeks honesty and "meaningful relationships," which believes other persons should be treated (to quote Buber) according to an "I-thou" relationship and not an "I-it" relationship, you have presented an epic which

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glorifies fraud, particularly in the person of Odysseus, but in many others as well, including a number of the "so-called" gods

Item 3: that in the face of a blossoming and promising "Women's Lib Movement" you see fit to dwell on a work in which women are, for the most part, chattel slaves to be bargained with

Item 4: that though we have been led to believe all our lives that there is only one God, and that he is logical, reasonable, and good, you instead present us with a multitude of deities, few of whom seem little if any better morally than the warriors who are so busily trying to hack each other to death

Item 5: that despite the fact that our generation has had the benefits of modern science from Galileo to Einstein, we are asked to take seriously the most laughable superstitions, such as attributing almost any and everything to the direct intervention of gods and goddesses in human affairs, not to mention the superstitious nonsense having to do with interminable sacrificing of goats and sheep to the gods at the slightest provocation

Item 6: based on the five preceding charges, we find nothing to support your claim that the poem known as the *Iliad* has any actual relevance to students of today, and we therefore sentence you . . .

At this point I fortunately awakened, greatly relieved not to be "sentenced," but rather indignant that I hadn't had time to cry out to all concerned that there is danger in judging a work of art out of its own time and context, and that any examination of a work's "relevance" must of necessity begin by understanding what it "stood for" in its own era.

I would now like to leave this somewhat apocryphal dream (hoping it has served its purpose) to raise the question "How *are* we to understand the time and context of the *Iliad?*" Works there are in abundance which attempt the explanation needed, but the ones I have sampled always seem to miss the crucial point. They speak of "Heroic ideals" or "the pursuit of excellence" or "artistocratic ideals" or "the foundations of western culture" or "the beginnings of humanism," but these are simply pieces of nomenclature. The phrases quoted seem primarily names given to attributes of the Homeric period which certain critics have deemed it advisable to lump together and label. What is needed is *FIRST* some explanation for why the "heroic ideals" or "excellence" or "aristocracy," or "culture" or "humanism" take the particular form they do in the *Iliad*—that is, how and why are they manifested in the particular events of the poem. To be even more specific, how are the heroic ideals manifested in the quarrel over Briseis, or Hector's prayer for his son, or the sacrificing of animals to Apollo? *SECOND,* and even more basic, "What is the origin of these ideals—how and why did they come about?" It is one thing to talk of "heroic ideals" but another thing to show historically why the ideals are what

they are and why they take the form they do in a particular work of art. What is needed is a theory which reaches "explanatory adequacy" rather than merely "descriptive adequacy."

I believe that to attempt an explanation of the sort mentioned it is necessary to recognize two things about the *Iliad*: First, it is essentially a poem about an aristocracy or leisure class as opposed to being a poem about the common man; second, it is a poem which reflects not a *unique* early Greek culture but rather barbarian culture in general, as it manifests itself at a particular stage of its development. The first of these points I feel is fairly obvious—the poem is almost entirely about the Greek and Trojan leaders, not the rank and file. We read a lot about Achilles, Agamemnon, and Hector, but next to nothing about Thersites, for example. The second point is a refutation of (what I consider) a somewhat unfortunate and misinformed view which sees the early Greeks as a people appearing mysteriously and suddenly on the scene, entirely different from other barbarian peoples of the time, whose manifest destiny was to found Western Culture and begin humanistic thought. What is needed is a general theory of barbarian culture, and, in particular, a theory concerned with that culture's ruling class. If the Greeks are indeed *not* unique, such a theory might throw light on the questions previously raised in regard to the "heroic ideals" found in the *Iliad*.

Undoubtedly there are a number of such theories which research by anthropologists, archaeologists, and historians has contributed to. But in the remainder of this paper I would like to consider the theory of barbarian culture put forth by Thorstein Veblen in his *Theory of the Leisure Class*, a book which carries the sub-title "An Economic Study of Institutions." Veblen's work is something of a classic in that general area which might be described as "Economics-Sociology." It has been standard reading on a number of "Great Books" lists and I will not attempt to provide Veblen's credentials here. What interests me is the apparent lack of any attempt to apply this socio-economic theory to the Homeric epics, and the fact that it explains much about them which needs explaining.

I shall attempt to sketch briefly the primary features of his *Theory of the Leisure Class* while freely admitting the impossibility of doing justice to a work of some four hundred pages in a few remarks. What I put forth must of necessity be suggestive rather than definitive.

According to Veblen, from an economic point of view, culture may be divided into three main types: savage, barbarian and industrial. The savage culture, which seems to account for a very small percentage of the human race, is typified by "small groups and a simple structure."[1] These groups are "commonly peaceable and sedentary." "They are poor and individual ownership is not a dominant feature of their economic system." Their culture differs from the barbarian culture in

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[1] All Veblen quotations are from Thorstein Veblen, *The Theory of the Leisure Class* (New York: Viking Press, 1935).

"the absence of a leisure class, and the absence, in great measure, of the animus or spiritual attitude on which the institution of a leisure class rests." "It is to be noted that this class seems to include the most peaceable—perhaps all the characteristically peaceable—primitive groups of men." Indeed, the most notable trait common to members of the savage culture is "a certain amiable inefficiency when confronted with force or fraud." Perhaps it would be safe to guess that those Indians who sold Manhattan Island to our forefathers for the equivalent of $24.00 were part of the savage culture.

The barbarian culture, which is the type of primary interest to the matter at hand, will be discussed in considerably greater detail. According to Veblen, the barbarian culture may be said to begin when the community passes from peaceable savagery to a predatory phase of life. This predatory phase of life ordinarily coincides with the commencement of the hunting of wild beasts for food, and often with the beginnings of conflicts of a military nature with neighboring tribes. As Veblen points out, there arises in this primitive barbarian culture a distinction between the kind of activity which involves prowess or exploit (such as big-game hunting and warfare) and the type of activity which might be classified as either service or industry (such as cooking, making of tools other than weapons, cutting up the kill, caring for children, etc.) which was usually carried on by the women, old people, slaves (if any), and others considered unfit by physique, age, or status for acts of exploit. The primitive barbarian warrior begins to view the exploitive or predatory activites as honorable, and the industrial or service activities as dishonorable or "women's work." It is a well known fact that in some tribes of today which are still at this level of culture, the hunters will not drag their kill home or cut it up—it becomes the duty of the women to take care of these non-exploitive functions.

Thus, in primitive barbarian culture, status is largely based on prowess in hunting and warfare, and although no real leisure class, as such, has developed, still an invidious comparison, from the standpoint of status, is made between the activities involving prowess, which are honorable, and those involving productive industry or service, which are base.

In the next stage of barbarian culture, referred to by Veblen as the "quasi-peaceable" stage, one finds that the earlier reliance on prowess or exploit for status has been elaborated on in a number of ways: First, the institution of private (rather than community) ownership has developed, probably as a result of the successful capture of female slaves. Then, the initial phase of ownership, based on seizure of captives, begins to pass into a subsequent stage which sees industry beginning to be organized on the basis of slave labor. Now status no longer depends entirely on direct exhibition of prowess in hunting and battle, but also depends on the evidence of ownership of slaves and the goods they produce. A leisure class of warrior-slave owners develops whose requirements as to status include both evidence of wealth in slaves and goods and the necessity of refraining from all activities of

an industrial or service nature—that is, refraining from all pursuits except those which someway relate to exploit. The approved activities for the warrior-slave owner of this period are government, warfare, religious observances, and sports, none of which, from a strictly economic point of view, exhibit any of the undesirable characteristics associated with productive industry or service.

As long as the barbarian community is small and close-knit, one's status is well-known to one's neighbors, but as the community expands it becomes more and more necessary for the warrior-slave owner to make his status generally known by putting his goods and slaves on public display. From this necessity there develop what Veblen calls "conspicuous consumption" and "conspicuous leisure." "Conspicuous consumption" takes the form of a public display of the consumption of expensive goods such as in dress, food, entertainment, habitation, gifts, etc. "Conspicuous leisure" usually takes the form of demonstrating one's status as exempt from any form of productive labor by the exhibiting of a collection of servants and retainers whose presence indicates conspicuously that their owner is so exempt. These servants and retainers often wear some insignia designating the master they serve, so that there will be no mistaking whose status is being enhanced by their service.

To keep this essay to a reasonable length, I must of necessity end my discussion of the theory itself here. Having given this brief, capsule version of certain salient features of Veblen's theory, I wish to raise the question as to whether the theory has any explanatory value in connection with the *Iliad*. I think it does, if one recognizes that the Greeks and Trojans of the time of the *Iliad* belong to the early stages of the quasi-peaceable barbarian culture described above. I say "early stages" because, as Veblen points out, this culture reaches its greatest development during the feudal days of the Middle Ages before eventually giving way to modern industrial culture.

Let us now return to the charges made against the relevance of the *Iliad* and try to re-consider the charges within the context of a quasi-peaceable barbarian culture. It has been charged that the *Iliad* presents us with a glorification of force and fraud. True, but these are the basic tools of exploit and prowess, and one's status in the quasi-peaceable barbarian culture depends on one's success with these tools. It is not too much to say that a man's *worth*, at least in the eyes of the barbarian leisure class, depends upon evidence of prowess through success in battle, taking of slaves, and exhibition of trophies and goods. Consider the quarrel between Achilles and Agamemnon. The quarrel is essentially a disagreement over the fair disposition of slaves and goods captured from certain allies of the Trojans. Achilles feels that he is not getting his fair share of the booty. Since the captured goods and slaves are status symbols, neither wants to lose face by having less than he considers his rightful share. It is quite unbelievable that Achilles so loved Briseis that his anger is caused by having to give her up—in fact, he later offers to let Agamemnon keep her. But his personal *worth*

in the eyes of others depends on his being able to exhibit the trophies of exploit, and Agamemnon's action threatens him directly in this area.

Or consider the rather odd prayer (by our standards, at least!) which Hector prays for his small son. Hector has been seen in the role of father and husband in the earlier part of the scene, and strikes one as being more humane and less glory-hungry than the other main characters. However, his prayer for his son says in part:

> Grant that my infant son may live
> To gather fame superlative....
> May the whole city muse upon
> His feats, as often as the car
> Brings him spoil-laden home from war
> (Spoil reddened with the owner's gore)
> To cheer his mother's heart once more.[2]

This prayer is not unnecessarily blood-thirsty; it simply recognizes that predatory success and the spoils that go with it are the greatest goal of the barbarian warrior—his status depends on them.

Since the greatest victories of a predatory sort are often achieved through fraud rather than force, the culture also holds an honored spot for the warrior who excels in this talent. Far from condemning Odysseus for his "Trojan Horse" trickery, the quasi-peaceable barbarian culture would have granted him status little if any behind that coming from the direct application of force. That Dante puts Odysseus deep in the Inferno as punishment for his fraudulent acts, only shows Dante to be operating under an entirely foreign set of values to that which permeates the *Iliad*.

I now turn to the charge which deals with woman's position in the *Iliad*. It is indeed true that women are bartered in somewhat the same manner that goods and cattle are in the *Iliad*—Achilles, for example, is offered "not only a shipload of gold and bronze treasures but the twenty loveliest women in Troy—Queen Helen alone excepted" if he will return to the fight. At the funeral games for Patroclus, Achilles announces the following prizes for a wrestling match: "The winner would obtain a large three-legged cauldron, valued at twelve cows; the loser, a highly-skilled slave-woman valued at four cows." In fact, there is considerable doubt as to the status of Helen herself—she is fought over as a prize by Paris and Menelaus, and there is no indication that her wishes have any bearing at all on the question of which man she will end up with. Andromache expects to do the work of a slave if she is captured, even though she is the wife of Hector. None of these examples is peculiar, however, in view of what Veblen says of the status of women in the quasi-peaceable barbarian period. Their normal role is that of chattel slave to a master, and their normal duties are those

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[2] This quotation from the *Iliad*, and others cited later, are from *The Anger of Achilles—Homer's Illiad*, translated by Robert Graves (Garden City, N.Y.: Doubleday and Co., Inc., 1959).

classified as non-exploitive, such as weaving, farming, or personal service. Only a few of "gentle blood" (defined by Veblen as "blood which has been ennobled by protracted contact with accumulated wealth or unbroken prerogative") have gradually become exempt from industrial employment. Usually it is the chief wife, where there is more than one wife, who is exempt, and her new role serves to enhance her husband's status by demonstrating his economic ability to keep an ornament exempt from productive duties. However, even Helen, who seems to fit this role of ornament, is diligent in weaving battle scenes into tapestries, and we suspect that there remains, even for her, the necessity of justifying her existence with some "woman's work"—that is, some non-exploitive productive labor.

I would now like to turn to the charges made against the *Iliad* which have to do with the gods and goddesses. It is charged that they are moral delinquents on the one hand, and that their role in the *Iliad* bespeaks the gross superstition of the Greeks themselves. As to their moral fitness, more than one critic has remarked that Homer purposely portrays the gods as worse than they normally are, either for satiric purposes or in order to inject some humor into what might otherwise be long, dull battle passages. I suspect this is an entirely erroneous viewpoint. When one examines the gods and goddesses from the viewpoint of the quasi-peaceable barbarian, they appear to be admirable personages indeed. Almost all their interference and intervention in the affairs of humans may be traced directly to their own competitiveness and desire for invidious comparison with each other in the area of status. They are effectively the agents of force (as when Apollo sends a pestilence among the Greeks) and fraud (as when Zeus sends Agamemnon a false dream, or Athena disguises herself as Deiphobus to lure Hector to his death). They stay strictly away from any activity which might be associated with industry or service. (An apparent exception to this would appear to be the forging of arms for Achilles by Hephaestus. But, as Veblen points out, the making of weapons and the caring for them, because of their close relationship to the activities of prowess, are exempt from the taint connected with most productive industry.)

The gods and goddesses use not only direct force and fraud to establish their position of honor, but also "conspicuous consumption" and "conspicuous leisure." The power of a god is enhanced by the public display of regular and costly sacrifices to him—the more waste of sacrificial sheep and goats in his behalf, the greater he is honored. Thus "conspicuous consumption" is found at the divine level as well as the human. Furthermore, just as the "conspicuous leisure" of the leisure-class barbarian is conveyed by his putting in evidence a large number of servants and other retainers, so is the "conspicuous leisure" of the god established through a large number of priests and other religious followers. In fact, it is argued by Veblen that such religious customs as observing days of rest in honor of a god, and the wearing of religious costumes such as vestments, owe their origin to the idea

of "conspicuous leisure." After all, it must be a great god who can afford for large numbers of his retainers to refrain from any productive work on certain days, and who can provide them with costumes which help demonstrate the impossibility of their performing any economically productive task.

In short, the gods and goddesses of the *Iliad* are not capricious, undependable, or malignant forces. Rather they exhibit the quasi-peaceable barbarian ideals at their best. In fact, there is much truth in the remark that "the Greeks created their gods in their own image," if it is understood that the gods represent the image of that most honored part of the Greek culture, the leisure-class.

As to whether the Greeks' belief in the frequent intervention of gods and goddesses in human affairs should be deplored as primitive superstition, let me at least argue that such intervention makes good logical sense. Given divine beings with the traits of the barbarian leisure class, would it not be peculiar if they failed to seize the glorious opportunities for assertion of individual prowess afforded by an event like the Trojan War. Indeed, how can it be imagined that they would stand aloof?

Having made these remarks about the gods and goddesses, I would now like to return to the overall matter of the *Iliad* and relevance. I have attempted to show in the discussion above that Veblen's *Theory of the Leisure Class* does offer an interesting and helpful theory for trying to understand the *Iliad* in terms of its time and context. But this is only the first step toward establishing relevance. If it could be shown that the quasi-peaceable barbarian culture and its ideals are still of importance in our present day, the matter of relevance would be much more firmly established. Once again Veblen's theory is helpful. I have made some mention of the savage and barbarian cultures as described in his theory, but have said little about his description of the third culture, the modern industrial culture. I think it is particularly interesting that Veblen finds in our modern industrial culture so many survivals of the predatory barbarian ideals. Unfortunately, because of space limitations, I will only be able to allude to them briefly.

I think it is fairly clear, for example, that there are certain obvious ways in which the ideals of barbarian culture have survived. Exploit and prowess are still admired under the system we usually refer to as "competition." It is often pointed out today that "life is competitive" and that "the best man wins." In fact, when we use the term "success" as in "That man is a success" it may reasonably be taken to mean that evidence has been given of prowess in competition with others, and that this prowess is evidenced in the accumulation and conspicuous consumption of goods. There is also the survival of the barbarian culture's views of the honorable status of employment which involves prowess as opposed to the lack of honor in the productive and service functions. Today one tries to be an "executive," if possible, rather than a producing worker on the assembly line. Veblen goes into considerable detail in tracing the survival of predatory traits in our modern institutions. It

is almost as though the same underlying principles which manifest themselves in the events of the *Iliad* manifest themselves in many ways in our modern industrial life, only of course, in different forms. If Veblen is right in this, then his theory links Homeric times with modern times in a most meaningful way, which is another way of saying it establishes a basic "relevance" of one period for the other.

Finally I would like to suggest, as a postscript to this essay, that the recent "hippie revolution" may have had as its unconscious guiding principle an attempt to break away from the barbarian ideals as they survive in our modern society. The advocacy by many of the hippies of love, peace and the simple life, along with their disdain of status and the conspicuous consumption of goods, argues a basic disagreement with barbarian ideals. It is, however, a breaking away which itself echoes an earlier culture—the savage culture which was referred to earlier in this paper, and which is typified by the peacefulness, poverty and "amiable inefficiency" of its members. This is a suggestion only, but one which bears, I think, further exploration, and which points up once again the utility of Veblen's *Theory of the Leisure Class* as an explanatory theory.

HISTORIOGRAPHY OF SCIENCE TEXTBOOKS

by LUCILLE B. GARMON*

In 1962 Thomas S. Kuhn, then teaching history of science at Berkeley after having obtained a PhD in physics, published a long essay called "The Structure of Scientific Revolutions."[1] The impact of this work was so great that interpretation of science history in terms of Kuhn's "paradigm→normal science→revolution→new paradigm" concept is now *de rigueur*.

Briefly, Kuhn's thesis is that any given branch of science emerges from its "pre-scientific" stages when someone enunciates a theory of sufficient reasonableness and explanatory power to unify and give a foundation to what had previously been disconnected and poorly developed work on a subject. Kuhn refers to this unifying theory, model, concept, or "universally recognized scientific achievement that for a time provides model problems and solutions to a community of practitioners"[2] as a *paradigm*. From this paradigm, "normal science" proceeds by established rules and methods until anomalies force a revolution in which the original paradigm is replaced by another and normal science in that discipline then carries on from the new paradigm.

The paradigm switch is more than a modification of theory; it is a Gestalt-like switch in a whole world-view, and woe betide the older scientist who cannot blink his eyes and behold reality from the new perspective.

Except for a few areas such as mechanics and astronomy, which developed operational explanatory models in antiquity, it is easy to find the point in history at which a paradigm is first established. Even if the preceding absence of a unifying theory and accepted approach were not obvious, succeeding writers in the discipline will in general agree on when and by whom their specialty was founded, even if they agree on little else.

Once a paradigm has been accepted, what had been an area of speculation becomes a branch of science, and once that recognition comes, textbooks in the subject are not far behind. For tracing the development of a scientific line of thought to its modern expression, old textbooks can be a science historian's gold mine.

How much a science has changed since it became established as a science can often be gauged by the extent of the brief historical ac-

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[1] Thomas S. Kuhn, *The Structure of Scientific Revolutions* (1st Edition, The University of Chicago Press, 1962; 2nd Edition, The University of Chicago Press, 1970). Quotations in this paper will be taken from the Second Edition.

[2] *Ibid.*, p. viii.

counts found in textbooks, and especially in the attitudes displayed toward whoever is recognized as the founder of the science or specialty.

Unless a textbook deliberately sets out to emphasize the historical approach, or is written during a pedagogical fad for "throwing in some historical stuff", there is a tendency for the amount of history included to decrease with time. Reasons for this may easily be speculated upon. The more time has elapsed since the founder's original publications, the more is likely to have happened, and the more of a chore it would be to recount it all. Also, it is not the purpose of a textbook to "confuse" the student with issues long since resolved; as more time passes it becomes less and less likely that the textbook writer himself has heard of them. So the text preface may contain a few remarks attempting to show the current relevance of the subject, from which its recent history may be inferred, and let it go at that.

The discipline of crystallograph, "founded" in 1784, serves as an excellent example of how historical treatment in texts varies as the discipline itself varies. Crystallography is narrow enough in scope to be traced with some thoroughness in the textbooks published throughout the nineteenth century.

Up until the seventeenth century, crystallography was little more than a branch of folklore. It was thought, for instance, that metals and minerals underwent an organic-like growth underground.[3] The mineral kingdom was not rigorously distinguished from the animal and vegetable kingdoms, "for minerals were thought of as bred in the womb of the earth,"[4] and animals were thought to be sometimes spontaneously generated from inanimate matter. In the seventeenth and eighteenth centuries certain aspects of crystal regularity were noted, some generalizations established, and a few classification schemes proposed. Toward the end of the eighteenth century, René Just Haüy (1743-1822) made crystallography a science by establishing the first paradigm.

Haüy's concept of the internal structure of crystals was more sophisticated than that of any of his predecessors, and also could be more easily and firmly fitted to the known facts about external crystal structure. The story of his accidentally dropping a large specimen of calcite and noting the shape of the cleavage fragments is well known, as is his deliberately breaking other crystals of calcite to see whether they yielded similar fragments, and when they did crying out Eureka-like, "*Tout est trouvé.*"

As modern historians point out, Haüy was not the first to notice regular shapes in crystals.[5] Yet he did what others had not: derive

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[3] Stephen S. Mason, *A History of the Sciences,* Revised Edition (New York: Collier Books, 1962), p. 77.

[4] C.C. Gillispie, *The Edge of Objectivity: An Essay in the History of Scientific Ideas* (Princeton University Press, 1960), pp. 58-59.

[5] John G. Burke, *Origins of the Science of Crystals* (University of California Press, 1966), p. 83.

laws which could serve as a basis for explaining a wide variety of crystal forms. Briefly, Haüy's theory was based on the assumption of a different kind of solid, flat-sided nucleus for each species of crystal, the external form being produced by building up these nuclei like bricks. He identified the nucleus with a *molécule constituente* (Later *molécule intégrante*) of the crystal.[6] The theory of "decrements", or the building up of secondary forms from stacking "molecules" in such a way that each layer was decreased a certain number of units in height and/or breadth from the preceding layer, was one of the greatest successes in Haüy's system, and lies at the basis of what is today called the law of rational indices.

The first English-language text on crystallography appeared in 1819, written by a Robert Bakewell as part of a more comprehensive text on mineralogy.[7] New textbooks and new editions of old books have been coming out regularly ever since. The changes in amount and nature of historical backgrounds found in a selection of nineteenth-century textbooks reflect this science's changing attitude toward its own state of development. Bakewell's book contains no history because there was, to his mind, practically no history of crystallography at that time. He devotes two chapters (67 pages) to explicating, in Platonic dialog style, Haüy's system of analyzing crystal forms.[8]

A much more widely read volume by Henry James Brooke, published in 1823, contains several pages of historical background in the science of crystallography, which Brooke considers to have begun in the last third of the preceding century. He states, "The regularity and symmetry of crystallized bodies do not appear to have attracted much attention as an object of scientific research until the time of Linnaeus, who attempted to construct a theory concerning crystals somewhat analogous to his system of Botany.[9] In amongst a number of other

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[6] René Just Haüy, *Essai d'une theorie sur la structure des cristaux appliquee a plusieurs genres de substances crystallisees* (Paris, 1784).

[7] *An Introduction to Mineralogy: Comprising the Natural History and Characters of Minerals; and a Description of Rocks, Both Simple and Aggregated; with a New Tabular Arrangement of Earthy Minerals, on a Plan Designed to Facilitate the Knowledge of that Class of Substances, To which is Prefixed: a Series of Conversations explaining the Principles of the Science and the Elements of Crystallography.* (London, 1819). Apparently Mr. Bakewell was a self-employed mineralogist, or one who did consulting work on the side, for the title page of his book contains an N.B. "The Author undertakes the Mineralogical Survey and Examination of Estates. Letters may be addressed to him at Mr. Harding's, 36 St. James Street."

[8] *Ibid.*, pp. 97-164.

[9] *A Familiar Introduction to Crystallography; including an Explanation of the use of Goniometer, with an Appendix containing mathematical Relations of Crystals; Rules for drawing the Figures; and an alphabetic arrangement of Minerals, their Symmetry and Primitive Forms.* (London, 1823), p. 33. Linnaeus (Carl Von Lĭnné, 1707-1778) was a Swedish botanist well known for the delight he took in devising classifications and systems of nomenclature for everything: animals, vegetables, minerals, diseases, etc.

names, Haüy is recognized for "completing the theory of decrements"; others working between 1800 and 1823 are given credit for simplifying Haüy's system.[10]

Crystallography had become well enough established by the 1840's to make even this brief background seem superfluous in a text; at that time no system of classification and nomenclature had received universal acceptance; in fact, proposed systems were multiplying. John Joseph Griffin's 1841 text, *A System of Crystallography,* thus limits its historical background to a recounting of various classification schemes. Linnaeus is much too outdated for him to bother with, so is Haüy. The names he is concerned with are mostly those of his own contemporaries, all competing for recognition of their own notational schemes.[11] Throughout the fifth through ninth decades of the nineteenth century, writers of crystallography textbooks generally presented only enough "historical" background so that the student could understand the current unresolved questions.[12] To show even further the decay of historical material in later textbooks, George H. Williams, publishing *Elements of Crystallography* in 1890, contents himself with a bibliography. Of the thirty-eight books listed, over half were published within the preceding dozen years, and only three (two of which are works of Haüy) appeared before 1830.[13]

Williams' dutiful inclusion of Haüy in his bibliography brings up another point. Despite their general paucity of historical material a majority of textbook writers consider themselves under a sort of obligation to make at least a passing reference to "the father of _____ology", especially if he is distant enough in the past so that his reputation, like George Washington's, has become pretty well ossified.

In works written during his own lifetime and shortly thereafter, the founder of a scientific specialty is treated as a colleague, to be priased or criticized according to the writer's convictions and tastes. Later he may undergo an eclipse during which a "normal science" has been established different enough from the original paradigm so that

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[10] *Ibid.*, pp. 33-35.

[11] *A System of Crystallography, with its Application to Mineralogy* (Glasgow, 1841), p. 149. In another context, that of mathematical intelligibility (pp. vii-ix), Griffin does mention Haüy. This is not so much to give a history of the development, however, as it is to show the superiority of his own approach. It is interesting that Griffin's main objection to the mathematics of Haüy is that it's too complicated. To the students of 1841, as to their descendents today, the *superior* mathematical approach is the *less* mathematical approach.

[12] For example, cf. James D. Dana, *A System of Mineralogy comprising the Most Recent Developments, including a Treatise on Mathematical Crystallography,* 4th edition (New York, 1859).

[13] *Elements of Crystallography for Students of Chemistry, Physics and Mineralogy* (New York, 1890), pp. vii, viii.

writers are not quite sure whether to talk about him or not, and if so what to say, and so say nothing. Then, as at the end of the tunnel, the great man assumes the distance required for a casual "homage to the god" approach.

During his lifetime, Haüy was much honored, but generally treated as a fallible human being. Some accepted his ideas more wholeheartedly than others. Bakewell is downright deferential and refers to no other authority. Brooke's account, on the other hand, seems to consider Haüy as one among many contributors, perhaps a forehead (rather than head and shoulders) above the rest. He mentions some shortcomings, and points to a few instances of erroneous judgment made toward the end of Haüy's career:

> I am perfectly disposed to [praise him] for having elevated crystallography to the rank of a science, but I cannot agree in that unqualified approbation of his recent works which some of his surviving friends have so liberally bestowed upon them. For these works will be found to contain errors of so remarkable a character as to excite our surprise when we recollect the generally accepted and esteemed judgement of their author.[14]

Brooke clucks over several inaccuracies of angle measurement "probably occasioned by the comparatively imperfect instrument with which these measurements were taken. That he continued to prefer this to the more perfect goniometer invented by Dr. Wollaston," Brooke attributes to decay of eyesight and dislike of change.[15] Brooke then closes his remarks by saying, "With all their faults . . . those works (a new edition of Haüy's treatise on crystallography and three volumes of a new edition of his treatise on mineralogy) present to the reader truly philosophic views of the sciences which they treat, and they cannot be perused without frequently affording him both gratification and improvement."[16]

William Whewell's *History of the Inductive Sciences*[17] may also be discussed in this section, even though it is not a textbook of crystallography. Whewell was Professor of Mineralogy at the University of Cambridge, and if he had written a textbook on crystallography it would have doubtless reflected the same attitudes about Haüy shown in his *History*. When Whewell published the 1847 edition of his *History*, Haüy was still a recent enough figure to have been known by people yet living. Whewell himself began his own acquaintance with crystal theory during Haüy's lifetime, and published his "General Method of Calculating the Angles made by any Planes of Crystals, and the Laws

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[15] *Ibid.*, p. x. Brooke dedicated his book "to the inventor of the reflective goniometer."

[16] *Ibid.*

[17] *History of the Inductive Sciences from the Earliest to the Present Time*, New, revised edition (London, 1847).

According to Which They Are Formed"[18] only three years after Haüy's death. Whewell's *History* acknowledges Haüy to be the founder of the "modern school of crystallography, for all those who have, since him, pursued their studies with success, having taken his views for their basis."[19] This may be an exaggeration for 1847, but Whewell is very matter-of-fact in assessing Haüy's system:

> In Haüy's views, as generally happens in new systems, however true, there was involved something that was arbitrary, something that was false or doubtful, and something that was unnecessarily limited. The principal points of this kind were; —his having made the laws of crystalline derivation depend so much upon cleavage; —his having assumed an atomic constitution of bodies as an essential part of his system; —and his having taken a set of primary forms, which, being selected by no general view, were partly superfluous, and partly defective.[20]

Whewell sums up Haüy by saying:

> Without being a great mathematician, he was enough of a geometer and more mathematical generalization could not have been done without making the subject less accessible and attractive to persons with little mathematical discipline. Haüy's reasoning was acute and clear. While his views are suggested more by lively fancy than by sage inductive spirit, so he misses the character of style, and felicity and happiness of illustration.[21]

which is as objective a view as any presented until the rise of modern historical scholarship.

Most texts written *qua* texts in the fourth, fifth, and sixth decades of the nineteenth century do not enter into much discussion of Haüy and his contributions. This is the eclipse period. In 1860 one can find evidence that Haüy is headed for enshrinement. In that year appeared Prof. Smithson Tennant and Rev. W. Mitchell's chapter on crystallography in Orr's *Circle of the Sciences.* Tennant's exposition gives no history *per se*; however, the introductory page of the section bears the likenesses of three men, assumed to be the outstanding giants of crystallography; first, Haüy; second, Wollaston; third, Tennant.[22]

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[18] *Ibid.*, p. 241.

[19] *Ibid.*, p. 223.

[20] *Ibid.*, p. 234.

[21] *Ibid.*, p. 229.

[22] Tennant and Mitchell, "Mineralogy and Crystallography," in Vol. IV, Inorganic Nature, of W.S. Orr's *Circle of the Sciences* (London and Glasgow, 1860), p. 289. Wollaston was the inventor of the reflecting goniometer, to whom Brooke dedicated his treatise in 1823; Tennant was a well-known crystallographer and mineralogist of the time, but hardly one of the all-time greats. Burke does not mention him in his *Origins of the Science of Crystals*, nor does Phillips in his highly historically oriented crystallography text. [F.C. Phillips, *An Introduction to Crystallography* 2nd edition (London: Longmans, Green & Co., 1956),] There is a mineral, Cu_3AsS_3, named tennantite.

The inclusion of Haüy in Williams' 1890 bibliography has been noted. A text by William J. Lewis, written in 1899, devotes four pages in the first chapter to Haüy's theory, beginning "In the year 1784 the celebrated 'Essai d'une theorie sur la structure des crystaux' was published, which fully established the correctness of the [constant interfacial angles] law and placed the science on a firm basis,"[23] and crediting him with finding that "cleavage-rhombohedra could be obtained which had identically the same angles, however different might be the shape of the original crystals."[24]

In 1918 there was a celebration organized in honor of the 175th anniversary of Haüy's birth. The issue of the American Mineralogist for June of that year carries a number of articles written as part of that celebration. Though not part of a textbook, these articles constitute too juicy an example of hero worship, Whig history,[25] or what-have-you not to quote from at least one of them. Perhaps the ultimate in fantasized history is the following:

> The broken calcite crystal, which lay at his feet, revealed to a very keen mind an interpretation of mineral forms that embodied, if not exactly the deepest truth, such a very considerable portion of crystallographic precision, as to ensure mineralogy's development upon mathematical principles. A crystallized calcite fragment slipped from the observer's hand and was sundered into cleavage pieces, which were rhombohedrons. A moment's hestiating inspection, and soon the observer, now become an experimenter, was engaged in slicing the rhombohedrons into smaller ones. The process continued, under the excitement of an illuminating suspicion, and as in the progressive subdivision, the endless rhombohedrons sprang repetitively into view, the suspicion became a conviction, and the formative theory of *molécules intégrantes*—irreducible nuclei—was born. And a structure of geometrical symmetry, built up by ultimate and equivalent particles, ushered in at once the conception of the

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[23] *A Treatise on Crystallography* (Cambridge: at the University Press, 1899), p. 10.

[24] *Ibid.*, pp. 10-11.

[25] "Whig history" has been neatly defined by Rhoda Rappaport in her article "Problems and Sources in the History of Geology, 1749-1810." (*History of Science* Vol. 3, 1964, p. 60), though the term is not original with her. She described "Whig" or "inductivist" thinking as "a tendency—now thankfully on the decline—to view the history of science as a succession of important discoveries which led inevitably to the abandonment of 'wrong' ideas and the formulation and acceptance of 'correct' theories," and added that this approach "leads to the selection and discussion of those figures and ideas deemed Good, while it precludes any reconstruction of the climate of opinion characteristic of a historical era."

"law of equal numbers."[26]

As another historian of crystallography has commented, "The truth is less romantic."[27]

Little remains in today's crystallography of Haüy's system, yet the textbooks still honor his name without going into any detail on just what he contributed. His position as a paradigm founder is well-deserved, for before him many philosophers could say, as did Count Buffon writing in 1785, "All the work of the crystallographers serves only to demonstrate that there is only variety everywhere where th y supposed uniformity . . . . that in nature there is nothing absolute, nothing perfectly regular."[28] After 1800, thanks to René Just Haüy, no one said that anymore.

What they did say, in each succeeding generation, may be read in the texts they wrote to inform the next generation. The revolutions are not outlined there. They must be inferred from a decade-by-decade comparison of books, for textbooks, as Kuhn pointed out, are rewritten whenever the language or standards of normal sciences change. And "once rewritten, they inevitably disguise not only the role but the very existence of the revolutions that produced them . . . the historical sense of a working scientest. . . [generally] extends only to the outcome of the most recent revolutions in the field."[29]

So old texts are valuable archives for scientist and historian alike. As Kuhn stated about the effect of his own delving into the history of science, "exposure to out-of-date scientific theory and practice radically undermined some of my basic conceptions about the nature of science and the reasons for its special success."[30]

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[26] Louis Pope Gratacap, "Haüy's Traite de Mineralogie, *Am. Mineralogist* 3 (1918), p. 101.

[27] R. Hooykaas, "Torbern Bergman's Crystal Theory," *Lychnos* 1952, p. 54.

[28] Burke, p. 54. Quoted from *Historie naturelle des mineraux*, vol. III, p. 433.

[29] Kuhn, p. 137.

[30] *Ibid.*, p. v.

RENAISSANCE LITERARY THEORY: SIDNEY, MILTON, AND THE ANGEL RAPHAEL

by MARTHA A. SAUNDERS*

In the area of literary criticism, Sir Philip Sidney's *A Defense of Poesie* is considered the chief representative work of the Elizabethan period. J.E. Spingarn writes "that no other work . . . can be said to give so complete and so noble a conception of the temper and principles of Renaissance criticism."[1] Being published posthumously only thirteen years before Milton's birth and being the compendium of literary thought that it is, Sidney's work contains ideas certain to have influenced contemporary literature. Milton, naturally, would have inherited these ideas. It is not surprising then to find that in Book V of Milton's *Paradise Lost* when the angel Raphael contemplates the means by which he will attempt to educate Adam, he outlines a theory of literature containing many of the major Elizabethan ideas previously proclaimed by Sidney. In lines 564-576 of Book V Raphael briefly touches on the ideas of the nature, form, and function of poetry:

> for how shall I relate
> To human sense th' invisible exploits
> Of warring Spirits; how without remorse
> The ruin of so many glorious once
> And perfect while they stood; how last unfold
> The secrets of another World, perhaps
> Not lawful to reveal? yet for thy good
> This is dispens't, and what surmounts the reach
> Of human sense, I shall delineate so,
> By lik'ning spiritual to corporal forms,
> As may express them best, though what if Earth
> Be but the shadow of Heav'n, and things therein
> Each to other like, more than on Earth is thought?[2]

The nature of poetry, according to Sidney, is imitation: "poesy therefore is an art of imitation, for so Aristotle termeth it in the word *mimesis*, that is to say, a representing, counterfeiting, or figuring forth—to speak metaphorically, a speaking picture . . . ." (p. 414)[3] This "speak-

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[1] J.E. Spingarn, *A History of Literary Criticism in the Renaissance* (New York: Columbia University Press, 1924; orig. pub. 1899), p. 268.

[2] John Milton, *Paradise Lost*, as found in *John Milton: Complete Poems and Major Prose*, ed. Merritt Y. Hughes (New York: The Odyssey Press, 1957). All references to this work will be to this edition.

[3] Sir Philip Sidney, *The Defense of Poesy*, as found in *Literary Criticism: Plato to Dryden*, ed. Allan H. Gilbert (Detroit: Wayne State University Press, 1962; orig. pub. 1940). All references to this work will be to this edition.

ing picture" is what Raphael wishes to present to Adam, but Raphael encounters a problem. What he wants to depict is invisible: "for how shall I relate / To human sense th' invisible exploits / Of warring spirits . . . ?" (564-566) The problem that Raphael faces, Sidney would say, is the problem faced by all "right poets," for in the subject of their imitations they "borrow nothing of what is, hath been, or shall be; but range, only reined with learned discretion, into the divine consideration of what may be and should be." (p. 415) Thus, for Sidney, the poet, like Raphael, must find the solution of "how [to] last unfold / The secrets of another world" (568-569).

For the men of the Renaissance, however, there was a way to solve this problem, which lay in their concept of God's relation to his created universe. Man and poet as man live in a world of sense, of physical objects, which are real in themselves but are at the same time a mirror or shadow of the ideal nature of the Creator himself. Raphael makes this point when he speculates "though what if Earth / Be but the shadow of Heav'n, and things therein / Each to other like, more than on Earth is thought?" (574-576) Thus, in an identification of Platonic and Hebrew doctrines, man reads the Book of Nature in order to learn the Book of God. On this point Raphael is explicit: "for Heav'n / Is as the Book of God before thee set, / Wherein to read his wond'rous Works" (VIII. 66-68).

It is the poet, however, who is most able to see the analogy between God and God's creation. In order for him to explain "the divine consideration of what may be and should be," (p. 415) he must use the language of accomodation; the presentation of "what surmounts the reach / Of human sense" (571-572), both Raphael and Sidney are convinced, can be accomplished only by giving the abstract or divine Idea a concrete and sensory form which can be comprehended by the reader from his experience of the world. Sidney's "speaking picture" will be one which "coupleth the general notion with the particular example" (p. 420); and Raphael's problem will be solved "By lik'ning spiritual to corporal forms, / As may express them best" (573-574).

The device of using the concrete likeness to express the abstract, the device of analogy, can be extended beyond the particular word choice to the larger fiction itself. Sometimes analogy is the only way to present an idea, as Raphael realizes when he attempts to describe to Adam the effects of the War in Heaven. He finds that he must use other terms, that he must "set forth / Great things by small" (VI.310-311). Sidney too finds merit in the use of extended analogies, citing for examples the parables of Christ and the "pretty allegories" of Aesop (pp. 422-423).

For Raphael and Sidney, however, the mere fact of the existence of poetry as a concrete analogy of the spiritual world is not enough. This "speaking picture" must exist for some reason, and the reason for both is pragmatic. The function of poetry, as they see it, is primarily pedagogical, but pedagogical with a particular end in view—that of moral purpose. The end of poetry, writes Sidney, is "to teach and to

delight," (p. 414) but he further adds that "the highest end of the mistress knowledge" is "of well doing and not of well knowing only." (p. 418) That Raphael has "well doing" as his aim in presenting his tale to Adam is evident: he tells Adam at the beginning of his narration that "yet for thy good / This is dispens't" (570-571); and later he reiterates, "let it profit thee to have heard / By terrible Example the reward / Of disobedience; firm they might have stood, / Yet fell; remember, and fear to transgress." (VI.909-912)

If poetry, therefore, is to move a person to "virtuous action," (p. 418) according to Sidney that poet will be most effective who entices men with promises of delight, thereby moving them unaware "to see the form of goodness, which seen they cannot but love ere themselves be aware, as if they took a medicine of cherries." (p. 429) One of the best ways for the poet to entice a man "from wickedness to virtue," (p. 427) Sidney believes, is with a tale—"a tale which holdeth children from play, and old men from the chimney corner." (p. 427) The tale, also, seems to fill Raphael's needs in order to make Adam understand the necessity of obedience.

Of all tales, however, the one best fitted to be the king of poetry, according to Sidney, is the heroical, which "doth not only teach and move to a truth, but teacheth and moveth to the most high and excellent truth." (p. 434) Although not making use of all the conventions of the genre, Raphael, in his narration to Adam of the War in Heaven, employs in a small way the form of the epic, realizing with Sidney that the image of those worthy of emulation "most inflameth the mind with desire to be worthy." (p. 434)

Poetry, thus, for Sidney and Raphael is the imitation of spiritual or ideal concepts, in the form of concrete sensory likenesses, disguised with delightful tales, to the end that men may learn virtue in order to be moved to emulate it. The pragmatic consideration, therefore, of what will have the most positive effect upon the audience is of prime importance. Much of Sidney's *Defense* is concerned with the problems of right poets and right poetry—what it is that will move men toward virtuous action. Raphael, also, is aware of the problem of finding the proper means of moving men toward the divine:

> for who, though with the tongue
> Of Angels, can relate, or to what things
> Liken on Earth conspicuous, that may lift
> Human imagination to such highth
> Of Godlike power.... (VI.297-301)

A QUASI-STATISTICAL ANALYSIS OF PERFORMANCE IN A SELF-PACED GENERAL GENERAL CHEMISTRY COURSE

by JIMMY C. STOKES* WILLIAM L. LOCKHART** and HUGHLAN W. POPE***

Programs involving the individualization of instruction have been the topic of a number of symposia recently, such as the Symposium on Self-Paced Instruction in Chemistry held at the 165th Meeting of the American Chemical Society in Dallas, Texas during April of 1973. The development of such academic programs are almost invariably followed by quantitative assessments of their effectiveness.

The effectiveness of a self-paced or individualized program can be approached from a number of viewpoints. The major premises to be tested are the effectiveness of a self-paced program on student achievement and the student's subsequent response to such a program of instruction. Several recent reports measuring student attitudes toward self-paced and other forms of individualized instruction are available. Charles Howard[1] and J.L. Hedrick[2], after rather extensive investigations, have shown overwhelming student response in favor of self-paced and individualized instruction. Other studies[3,4] report similar findings. In addition to improved student attitudes and responsiveness, many investigators agree with Hedrick that the instructors experience a substantial positive response to self-paced instruction with respect to improved professional awareness.[5,6,7]

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[1] Charles Howard, "A Quantitative Appraisal of A-V-T Program," *Journal of College Science Teaching*, IV (1974), 338.

[2] J.L. Hedrick, "The Keller Plan and Student Evaluation," *Journal of Chemical Education*, LII (1975), 65.

[3] G.E. Parker and T.R. Mertens, "Programmed Instruction, Test Performance, and Classroom Discussion," *Journal of College Science Teaching*, IV (1974), 107.

[4] George Gilbert, "Self-Pacing: Evangelism and Effectiveness," in Bassam Z. Shakhashiri (editor), *Proceedings of the Symposium on Self-Paced Instruction in Chemistry* (Easton, Pennsylvania: American Chemical Society, 1974), p. 35.

[5] Robert F. Pasternack, "A Self-Paced Instruction Chemistry Course at Ithaca College," *ibid.*, p. 3.

[6] Daniel Steffenson, John Crump, and Dennis Gaswick, "Keller Units for Some Topics in General Chemistry: The Design for a Modular Chemistry Course," *ibid.*, p. 17.

[7] R.L. Kuczkowski, H. Brintzinger, D. Dull, and J. Thomas, "Experiments with Keller Type General Chemistry Courses at Michigan," *ibid.*, p. 43.

Several investigations regarding student achievement in self-paced instruction have been made.[8,9,10] Many of these concur with Lewis and Wolf who found improved but not statistically significant gains in student achievement. Even though there are usually higher levels of achievement in the self-paced programs, no statistically significant differences have been demonstrated between individualized instruction in normal college courses and traditional academic instruction.[11,12,13] Numerous reports show increases in performance with remedial type programs.[14]

This paper describes a program of self-paced instruction in general chemistry which is reasonably different from most of the new programs for individualized instruction in general chemistry. The report compares achievement of students in traditional versus a lecture-oriented self-paced general chemistry program.

The Program. The course under evaluation was the general chemistry course offered Fall Quarter, 1974, at West Georgia College, Carrollton, Georgia. It was offered in two sections and team taught by the authors. The same instructor lectured to both sections of the course. At the beginning of the course, students in each section were allowed to select traditional or modular (self-paced) instruction. Students electing traditional instruction were given four, fifty minute examinations and a fifty question comprehensive final examination. Questions on the traditional final examination were taken from the self-paced examinations given during the quarter. For students selecting the modular program, the course was divided into eighteen units or modules. Students were allowed to take the examinations at their discretion during the quarter. Examinations had to be taken sequentially and students who scored less than seventy percent had to repeat examinations. The second examination in each unit was designed to be more difficult, thereby emphasizing the importance of passing the first examination given on each unit.

Students in the modular program followed a study guide, detailing performance expected, and appropriate references for material covered in lecture. Lectures were videotaped and placed on reserve in the

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[8] G.E. Parker and T.R. Mertens, "Programmed Instruction, Test Performance, and Classroom Discussion," *Journal of College Science Teaching*, IV (1974), 107.

[9] Charles Howard.

[10] D.A. Lewis and W.A. Wolf, "Student Performance Before and After the Keller Plan," *Journal of Chemical Education*, LI (1974), 665.

[11] G.E. Parker and T.R. Mertens.

[12] Charles Howard.

[13] D.A. Lewis and W.A. Wolf.

[14] Education Professions Development Act (EPDA) Workshop on Recruiting and Instructing the Deprived Student, Clayton Junior College, Morrow, Georgia, August 21-30, 1972.

college library. Both modular and traditional students had access to study guides and the videotaped lectures. Lecture attendance was not required for either the traditional or modular group. Essentially, modular and traditional students could approach the program in exactly the same method except for the self-pacing concept. From a final course enrollment of 78 students, 53 elected modular instruction and 25 students chose the traditional instruction.

Testing Statistics

A comparison of modular and traditional student performance was achieved through examining scores on the eighteen modular examinations for self-paced students compared with a comprehensive fifty question examination for the traditional students. (This comprehensive examination was a composite of questions from the eighteen modular examinations). No questions appeared on the composite examination which had not been included in the modular program.

The mean of the student performance on the modular examinations was 78.9%. the mean score of the traditional students on the composite final examination was 66.4%. A statistical comparison was made using the chi square technique. The chi square determination was selected because of the lack of an absolute testing model.[15] It should be pointed out that no attempt was made to randomize the two groups, and they were generated as a result of student enrollment. This was the first quarter that such a program was offered by the Chemistry Department at West Georgia College, and, therefore, no predetermined bias and been established concerning the two programs. Every attempt was made by the instructors to maintain a neutral position concerning the program elected by the students.

Student interest in the use of self-paced instruction was also examined. Many such studies are evaluated on student surveys. It is more realistic to analyze the response of the same students to a second quarter sequential course taught in the same fashion. Sixty-nine of the students taking the first course enrolled in the second. Of these, nearly ninety percent took the modular option as compared with nearly seventy percent in the first course. Therefore, by comparing the number of students electing modular instruction in the second course with those in the first course, a true level of student response to such a program can be determined.

Results

Table I indicates the performance of traditional and self-paced students. (Testing described earlier in paper).

Table II indicates the numbers of students involved in modular and traditional programs Fall Quarter compared with Winter Quarter.

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[15] Phillip H. DuBois, *An Introduction to Psychological Statistics* (New York: Harper and Row, 1965), pp. 52-72 and 486.

TABLE I

STUDENT PERFORMANCE

Chemistry 121 Modular Instruction Mean, 53 students	78.9%
Chemistry 121 Traditional Instruction Mean, 17 students (8 students did not take the composite examination)	66.4%
Chi Square Value, 1 degree of freedom	2.353
Chi Square Value for significant difference at 0.10 confidence level	2.706

(The fact that the test chi square value, 2.353, is just less than the value established for the 0.10 confidence level indicates that with greater than 50% confidence but just less than 90% confidence it can be statistically stated that the above means differ significantly.)

TABLE II

STUDENT ENROLLMENT IN COROLLARY PROGRAMS

	Chemistry 121 (Fall)	Chemistry 122 (Winter)
Traditional Program	25	8
Self-Paced (Modular) Program	53	61
Chi Square Value, 1 degree of freedom		13.276
Chi Square Value for significant difference at 0.01 confidence level		10.827

(The fact that the test chi square value, 13.276, is greater than the established value for the 0.01 confidence level indicates that with 99.9% confidence it can be statistically stated that the above distributions differ significantly.)

Conclusions

Based on the data generated in this study and realizing that the study is based on pragmatic conditions and not ideal statistical param-

eters, it is felt that the following conclusions are justified.

I. Student achievement in self-paced general chemistry at West Georgia College is substantially higher than with the traditional approach. Although the results show a statistical significance, at approximately the 90% confidence level, it is possible to rationalize that the difference may be even more than it appears in view of the limited range of grade results, usually falling between 60 and 90 percent. It is interesting to note that the grade result differential in this study is quite pronounced compared with studies by Lewis[16] and Gilbert[17].

II. Most students definitely prefer the self-paced program of instruction to the traditional system. Still, some do perform better with traditional programs. Therefore, we plan to continue offering both programs, allowing students to select the plan best suiting their needs.

III. Concurring with other studies, it is felt that the instructors are making a more significant contribution to the overall improvement of the quality of teaching and instruction in the department through involvement in this program. The program requires more individual effort, especially in a laboratory science and the need for an open, self-paced laboratory in addition to the lecture program. The program requires more concentration on the part of the instructors, making sure that videotape programs are adequate, maintaining office hours for testing schedules, and making a more concerted effort toward involvement with the individual student. Self-paced instruction is demanding on the instructor, but the rewards far outweigh the demands.

Acknowledgement

We would like to express our most sincere appreciation to Mr. Jerry Mock, Dr. David Seiber, and the Instructional Media Staff for their cooperation, patience, and encouragement in the development of this program.

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[16] D.A. Lewis and W.A. Wolf.

[17] George Gilbert.

ABSTRACTS of MASTER'S THESES and SPECIALIST IN EDUCATION PROJECTS

Balcerak, Mary (MA, Psychology, June, 1974)

EMPATHY

A survey of the literature for studies indicating the therapeutic conditions necessary for positive behavior change in patients. The author provides a review of past studies with a summary of the indications and then presents more recent studies, including methodology and results, as well as implications for the future.

Bercaw, George Henry B.A. (MA, Psychology, June, 1974)

A MEANING SYSTEMS MODEL: MATERNAL, FAMILIAL, PEER, AND INTERNAL

The author proposes four meaning systems: the maternal, familial, peer, and the internal, in an attempt to account for the research data and postulates arising from traditional psychodynamic psychology as being a flip-side of existential concerns. He focuses upon meaningfulness as a viable construct in effecting a personal life-style that lends itself to personal growth.

The author suggests that psychology need not only address itself to developmental stages of personality, but that it can view the same under the aegis of a process psychology. The Meaning Systems Model addresses itself to process dynamics of personal growth—social, dyadic, and individual.

It is postulated that the development of the internal meaning system may be the only viable construct for future society and, that societal institutions will reflect the base lines of new meanings as they are invented by a new consciousness that envisions life in terms of its alternatives.

The author posits that new dimensions of intimacy will evolve and that a shared mutuality will be its central focus. Thus, he proffers that the heterosexual intimate dyad is the most powerful agent for change and growth as he examines societal competitors to intimacy.

The thesis is both a theoretical and a personal statement of psychological insight and experiential meanings.

Coker, Joan G. (Specialist in Education, June, 1974)

A STUDY OF SELECTED WECHSLER INTELLIGENCE SCALE FOR CHILDREN SUBTESTS AS A METHOD FOR DIAGNOSING LEARNING DISABLED CHILDREN

Three null hypotheses were stated:

Children who have been diagnosed by a child psychiatrist as learning disabled will demonstrate no significant difference on the total Verbal Scale scores and the total Performance Scale scores of the WISC.

Children who have been diagnosed by a child psychiatrist as learning disabled will demonstrate no significant difference on the combined Comprehension and Similarities subtest scores than on the combined Information and Arithmetic subtest scores of the Verbal Scale of the WISC.

Children who have been diagnosed by a child psychiatrist as learning disabled will demonstrate no significant difference on the combined Picture Completion and Picture Arrangement subtest scores than on the combined Block Design and Coding subtest scores of the Performance Scale of the WISC.

The final results of the study indicated that there was no significant difference in total Verbal Scale scores and total Performance Scale scores on the WISC for the sample population. However, this sample population scored significantly higher ($>$ .01) on the combined Comprehension and Similarities subtest scores than on the combined Information and Arithmetic subtest scores of the Verbal Scale of the WISC. In addition, the sample population scored significantly higher ($>$ .05) on the combined Picture Completion and Picture Arrangement subtest scores than on the combined Block Design and Coding subtest scores of the Performance Scale of the WISC.

The final results from the study indicated that teachers could refer to WISC subtest scores for quick diagnosis of possible learning disabled cases; however, it was emphasized that final evaluation and diagnosis should be made by qualified personnel in all suspected learning disabled cases.

McChesney, Jr., Samuel Jefferson (MS, March, 1975)

THE DISTRIBUTION OF FISHES OF THE LITTLE TALLAPOOSA RIVER, CARROLL COUNTY, GEORGIA

A survey was made of the distribution of fishes of the Little Tallapoosa River in Carroll County, Georgia. A total of 24 collections and one creel survey were made at 15 stations on the river. Thirty-one species from seven families were recorded and plotted on distribution maps. The families include Cyprinidae, Catostomidae, Ictaluridae, Poecilidae, Centrarchidae, Percidae, and Cottidae. The survey revealed 3 species not previously reported from the Little Tallapoosa River in Carroll County. In addition, 4 species not earlier reported from the Little Tallapoosa River drainage, and one species not earlier reported from the entire Tallapoosa River drainage were captured.

The effect of four channelized areas on the diversity and distribution of species is discussed. In addition, the effects of two waste water treatment facili-

ties and two oxidation ponds upon the fishes of the river is analyzed. The species diversity was found to be lower in areas of more recent channelization and in those locations nearer the outlet of waste water facilities.

McCollum, Jerry Lawson, (MS, March, 1975)

THE DISTRIBUTION OF FISHES IN THE DOG RIVER DRAINAGE

A Field study was conducted in order to determine the fish species present and to determine their distribution within the Dog River drainage system. Twenty-seven species of fish were found to occur within the drainage. The distributions of these species were recorded and mapped. The distributions are based on personal collections made from March, 1974 to February, 1975 using various collection techniques. Six additional species are suspected to occur based on previous collection records.

The distribution of several species was found to be quite erratic when judged strictly on basis of the number of specimens collected and the location of the collections. Several possible explanations for erratic distribution are discussed. *Notropis zonistius* and *Percina nigrofasciata* were found to be widely distributed. Factors contributing to the wide distribution of these two species are discussed.

The bottom of the stream from site 1 upstream to the motorcross track finish line is apparently highly unstable. The possible effects on fishes are discussed.

Sharpe, Jane E. (Specialist in Education, June, 1974)

AN ASSESSMENT TO DETERMINE THE EFFECTIVENESS OF THE WISCONSIN DESIGN FOR READING SKILL DEVELOPMENT WORD ATTACK SKILLS ON THE READING OF THIRD GRADE STUDENTS AT ANNETTE WINN SCHOOL

To determine the effectiveness of the Wisconsin Reading Design Program for Word Attack, initiated in the Annette Winn School in Lithia Springs, Georgia a descriptive study was begun in Douglas County in 1973. The investigator followed the progress of all third grade students participating in the Design for one year. Data were collected through testing instruments and parent and teacher questionnaires. This study involved seventy-four third grade students.

All third grade students were tested in September, 1973 to determine the number of word attack skills mastered at that point. Children were then grouped into a skill area according to needs for twenty-five minutes a day for an eight day time period. The children were then tested at the end of the teaching period for an evaluation to see if the needed skill being taught was mastered. The Iowa Test of Basic Skills was administered at the beginning and end of the 1973-1974 school year. Teacher and parent questionnaires were given at the end of the year.

The final results from the study indicated that the subjects showed significant gains at the .05 level of confidence in vocabulary and total reading. There was no significant gain in word analysis between the Iowa Achievement pre

and post-test scores. The study indicated that a longitudinal study is needed to determine the value of the Wisconsin Reading Program for Word Attack.

Sims, James Randall (MA, June, 1974)

PERFORMANCE ON THE HARVARD GROUP SCALE OF HYPNOTIC SUGGESTIBILITY AS A FUNCTION OF HYPNOTIC AND HYPEREMPIRIC INDUCTION TECHNIQUES

One hundred and three undergraduates from West Georgia College were administered Form A of the Harvard Group Scale of Hypnotic Susceptibility after receiving either a traditional hypnotic induction or a hyperempiric induction based on suggestions of mind expansion, enhanced awareness, and increased alertness and sensitivity. It was predicted that subjects who had received the hyperempiric induction would score higher on the Harvard Group Scale of Hypnotic Susceptibility than subjects who had received the hypnotic induction.

Chi-square analyses of the percentage of subjects responding to each item on the scale were computed together with a chi-square analysis of the overall test scores. The hyperempiric subjects did not perform significantly better in terms of their overall scores; however, their performances were significantly better on two items: responding to a hallucinated fly ($p = .01$, one-tailed), and post-hypnotic suggestion ($p = .05$, one-tailed). The results support the conclusion that hyperempiria is a desirable alternative to hypnosis in therapeutic situations which utilize post-trance suggestion or fantasy techniques as a means of bringing about desired changes.

Sparrow, Gregory Scott (MA, June, 1974)

LUCID DREAMING AS AN EVOLUTIONARY PROCESS

This study represents a preliminary attempt to compare lucid dreaming, or dreams in which the dreamer is aware that he is dreaming, with the Jungian theory of ego development. The dream state is compared with the primitive state of the ego, and the arousal of lucidity is likened to the first traces of self-reflection in the primitive psyche. An attempt is made to establish stages in lucid dreaming which have distinct parallels in ego formation, as described by Jung and Neumann.

The phenomenon known as out-of-body experience is discussed as a corollary of lucid dreaming. Instead of regarding the out-of-body experience as necessarily a physical displacement of a finer physical body, this paper discusses it as a meaningful perception of the dreamer which arises from the need to insulate the growing sense of independence from the dream environment.

An attempt is made to compare lucidity with the goals of Gestalt Therapy which emphasize the need for a development of greater awareness in areas of conflict. The lucid dream is regarded as a situation in which awareness rises to such a level as to allow the individual to confront a rejected aspect of himself in an open and fearless manner.

After an attempt is made in the Introduction to support the hypothesis that

lucid dreaming is an evolutionary process with stages comparable to stages of ego development, the author describes some techniques believed to stimulate lucidity in his own case.

In the Results, examples of the culminative stages of lucid dreaming are presented which strongly support the evolutionary model as described in the Introduction. The type of experience available to the lucid dreamer appears to be identical to the mystical experiences as described by the great contemplatives and mystics.

In the Conclusion, the author concludes that the lucid dream may be one of the most effective confrontations an individual can have with an inner conflict, that there is a distinct parallel between lucid dreaming and ego development, and that lucid dreaming may offer keys to the further understanding of ego formation. It is further concluded that the experiences available to the lucid dreamer are likely to result in a revision of traditional dream theories and current models of the nature of man.

Thurston, Mark Alan, (MA, Psychology, June, 1974)

AN INTEGRATED APPROACH TO MEDITATION

There are many meditation techniques found in literature. Perhaps the most important is the focusing upon an affirmation or mantra. The meaning or consciousness of the mantra is then awakened within the mind of the meditator as he focuses upon it during the stillness of meditation.

To test the effects of such an approach to meditation, 218 *Ss* from the membership of the Association for Research and Enlightenment were selected. All aspects of the experiment were carried out by the *Ss* in their own homes and various tests and reports were mailed to the *E*. *Ss* were randomly assigned to a control group and an experimental group of equal numbers. Based upon information that had been obtained earlier, the two groups were assigned an equal number of *Ss* who had had previous meditation experience. All *Ss* completed a series of tests before the beginning of the experimental period: the I.P.A.T. Anxiety Scale Questionnaire, the Mooney Problem Check List and a telepathy test. *Ss* in the experimental group also received a workbook-manual giving detailed descriptions of the philosophy and practice of meditation. They were instructed to follow the concepts in the manual and to meditate daily for at least 20 minutes during the 28 day experimental period. The control group was instructed to continue their current meditation schedule and not to increase the frequency of meditation (many were non-meditators and were not to start meditation in this 28 day period). At the end of the experimental period, each *S* again completed the three tests.

Results showed a significantly greater decrease in anxiety ($p < .00$) and in problems ($p < .005$) for the experimental group compared to the control group. No significant differences were obtained for the telepathy test. Within the experimental group, no significant changes were found for any measure when the data was divided into three groups according to previous meditation experience. For *all Ss*, those who had had no previous meditation experience scored significantly higher ($p < .025$) on the initial administration of the Mooney Problem Check List than did the other *Ss*. No difference was found in this regard for the I.P.A.T. Anxiety Scale Questionnaire or the telepathy test.

Wheeler, Alice Sherman (MA, June, 1974)

COMMUNITY RESIDENTIAL FACILITIES FOR THE MENTALLY RETARDED

This paper presents the group home precedent for children and adult retardates functioning in the concept of small, dispersed residences, select guidelines for group living and working in the community, and the rationale that group homes are a part of the continuum of services for the retarded. Factors leading to the unfolding of these local-based residences are also given.

Pioneering, historic moves in the area of mental retardation* implemented a major step in service delivery to the retarded client. Whereby, the ultimate goal of bringing each person via a personalized program of quality has been toward a realization of an individual ceiling level of self-sufficiency and self-support.

The community residential facility is the accomplishing means of this goal. It permits a near normal existence for the retarded allowing for a smaller, more individualized, home-like atmosphere. Appropriate models provide for emulation and peers furnish comfort. In addition, adequate patterns of living and association with the broader community are encouraged through both leisure and work activities. Here the retarded person can live with dignity in an atmosphere designed to elicit and nurture his maximum potential abilities.

The group home is not only a much more humane provision for living, but its implementation is more economically feasible than total institutionalization.

Awareness by the general public to the plight of the mentally retarded will hasten this change—hopefully.

Whitenton, Jr., Joseph B. (MA, June, 1974)

ANOMIA AND RURAL AFDC RECIPIENTS

A sample of fifty-eight women receiving Aid to Families with Dependent Children (AFDC) were interviewed. Among the questions in the interview schedule were those considered as indicators of dependency as well as the Srole Anomia Scale. The indicators of dependency: relying solely on AFDC income, optimism (future planning), health, having been on welfare more than once, and feelings of having to follow the serviceworker's advice, were associated with anomia in order to establish a relationship between the two sociological states. Four of the five hypotheses relating anomia and the indicators of dependency were confirmed. Thus, it was concluded that a definite relationship exists between the social psychological state of anomia and welfare dependency although causal order was not determined since longitudinal data was not obtained.

Abner, Agnes A. (Specialist in Education, June, 1974)

AN EVALUATION OF THE EFFECT OF KINDERGARTEN EXPERIENCES ON READING READINESS AND READING ACHIEVEMENT FOR A FIRST GRADE POPULATION AT SAND HILL ELEMENTARY SCHOOL 1973-1974

This study was designed to determine whether or not kindergarten experiences resulted in significant differences in reading readiness and reading achievement in first grade between children who had had kindergarten experiences and children who had not had kindergarten experiences.

Two groups of first grade children, seventeen who had had kindergarten training and twelve who had not had kindergarten training, were chosen as subjects for this study. These groups were found to be relatively equivalent in sex ratio, intelligence test information, and socio-economic status. Both groups of children were assigned to one self-contained classroom at the Sand Hill Elementary School, Carrollton, Georgia.

To evaluate the groups in reading readiness, the Metropolitan Readiness Test, Form A, was administered to both groups in September of 1973.

Using the Metropolitan Readiness Test scores and teacher judgment as the main criteria for grouping, the teacher then placed the children in six basic reading groups for reading instruction for a period of eight months. These groups were flexible so that a child could move into or out of a group as he needed. Individual and additional small group instruction in reading were also provided for both the kindergarten and the non-kindergarten children. There were some children from both groups in each of the six basic reading groups.

At the end of eight months of reading instruction, to evaluate reading achievement the Gates Primary Reading Tests of Word Recognition, Sentence Reading, and Paragraph Reading were administered to both groups.

To determine significant differences a comparison of the means and the *t* test for the twelve independent means in reading readiness and reading achievement were made. Eight of the independent means pertained to reading readiness and four of them pertained to reading achievement.

Upon an examination of the means and the *t* values for the eight areas of reading readiness and the four areas of reading achievement, it was found that there were no significant differences at the .05 level of confidence.

However, since the kindergarten group did considerably better in all the areas except one of reading readiness and one of reading achievement, it is recommended that further studies be made to determine exactly what, if any, the factors are in kindergarten experiences that result in improvement in reading readiness and reading achievement in first grade.

Ambrose, Barbara Dickey (Specialist in Education, June, 1974)

A COMPARATIVE STUDY OF TWO METHODS OF TEACHING MATEHMATICS TO FIFTH GRADE STUDENTS

A study of mathematical gains of two fifth grade classes was conducted in order to compare two methods of instruction used. Children, in the control

group (Group C), from a self-contained classroom were taught by the class-as-a-whole method. Children, in the experimental group (Group E), from an open classroom were free to make choices, served as peer helpers, and participated in self-direction. Thirty students composed the study.

Three null hypotheses were tested to determine if significant differences existed in mathematical achievement and self concept between the two groups. The *t* test was used to test the hypotheses. Findings indicated no significant difference could be found, except in one of thirteen diagnostic testing areas, to reject the hypotheses that neither method of instruction was significantly superior in producing mathematical gains. The rejected area concerned the understanding of number bases and measurement.

A larger group study over a longer period of time possibly would have produced different results.

Recommendations for further study were included.

Bailey, Marian J. (Specialist in Education, June, 1974)

CORRELATION OF THE GESELL INCOMPLETE MAN TEST AND FIRST GRADE READING ACHIEVEMENT

The purpose of this paper was to determine the relationship between the developmental age as measured by the Gesell Incomplete Man Test and mental age as measured by the Peabody Picture Vocabulary Test with reading achievement measured by the Scott Foresman Reading Systems Test. Two groups of first grade children from a small town and rural area were used. Group A contained 23 children who completed Level Two of the Scott Foresman Reading Systems and Group B with 60 children who completed Level Four. Results indicated a significant relationship at the .05 level between mental age and reading achievement of the subjects in Group B. A stepwise regression program used with Group B indicated that mental age measured by the Peabody Picture Vocabulary Test and sex accounted for the statistically significant amount of variance.

Bowen, Sarah Louise (Specialist in Education, June, 1974)

CONSUMER BEHAVIOR OF TEENAGERS

This study has considered whether or not teenagers manage their money and the money of their families wisely without consumer education. A survey was conducted of the seniors at Fayette County High School to ascertain what their sources of income were and for what they used their incomes chiefly. The results of the survey indicated that teenagers do not manage money wisely without consumer education.

Catlett, Louise C. (Specialist in Education, March, 1975)

A LONGITUDINAL STUDY OF RELATIONSHIP BETWEEN READING ACHIEVEMENT AND CHRONOLOGICAL AGE AT GRADES ONE, TWO, FOUR, AND SIX OF STUDENTS AT NORTON PARK SCHOOL

This study was designed to compare the relationship between reading achievement and chronological age of students at Norton Park School. The age of entry to school, the sex, the reading achievement scores at grades one, two, four, and six were recorded from the permanent records of the students who entered and remained at this school for a period of five years.

The Pearson Product—Moment Coefficient of Correlation was used to show the correlation of scores made by the total group between their reading achievement and chronological age, the total boys between their reading achievement and chronological age, and the total girls between their reading achievement and chronological age at grades one, two, four, and six. No significant correlation for any group at any level was found except one.

Cobb, William Edward (Specialist in Education, June, 1974)

THE EMERGING MIDDLE SCHOOL

For over a half century the American educational system has included in its organizational structure an intermediate school to cope with the educational needs of early adolescents. The question of what grades should be included in this school has never been completely settled.

In the last fifteen years a movement to reorganize the educational ladder in order to introduce the middle school concept to replace the junior high school has gained momentum. Because of this trend toward the middle school, this study researched literature to determine the ramifications of the middle school program. Conclusions reached as a result of the study indicated that the needs of the "in between age" pupil are not being met by the existing 6-3-3 plan. It is recommended that the middle school include those pupils who are in grades six through eight and are between the ages of eleven to fourteen.

The physiological, mental, emotional, and social make-up of children in these grades was considered more compatible than for any other grouping.

There seems to be a definite lack of teacher training by colleges and universities in preparing teachers to teach the middle school age child. College officials should be aware of this deficiency and exercise new approaches and programs to prepare teachers to teach in the middle school programs.

The trend toward the middle school concept is rapidly gaining momentum and very well may replace the traditional junior high school that has existed in America for more than a half a century.

Cordle, Gary S. (Specialist in Education, March, 1975)

A COMPARISON OF THE READING ACHIEVEMENT OF SECOND GRADE STUDENTS USING THE GINN READING 360 PROGRAM WITH THE READING ACHIEVEMENT OF SECOND GRADE STUDENTS USING THE GINN READING 100 PROGRAM

This project was undertaken in an effort to provide some unbiased research

on two different reading programs. The objective of this study is to determine if there is a significant difference, at the .05 level, in the reading achievement of second grade students taught with the Ginn Reading 360 and students taught with the Ginn Reading 100 program.

There were 116 students in the Reading 360 group and 143 students in the Reading 100 group. From each of these groups 40 students were randomly selected to be statistically compared. Reading achievement was measured by a group administered Metropolitan Achievement Test, Primary Battery for grade 2. The *t*-test for a difference between two independent means was used to see if there was a significant difference in the reading achievement of the two groups.

There was no significant difference in the reading achievement of the two groups. Selection between reading programs where student achievement is nearly equal should be done on the basis of teacher and school familiarity. Cost of a program and student interest should also be considered when achievement is relatively equal.

The study should be repeated annually for the next three or four years to see if the Reading 360 program does produce higher reading achievement when used for a longer period of time. The study should be expanded to evaluate students' interest in reading, also a method to measure increase in creativity should be included.

Craig, Dorothy (Specialist in Education, June, 1974)

A STUDY OF THE CHARACTERISTICS OF DROPOUTS AND THE COMPARISON OF SELECTED CHARACTERISTICS OF THE DROPOUTS WITH THE STAYINS

This study was an attempt to compare selected characteristics of dropouts with stayins of the 1973-1974 senior class of the Fairmount School.

Data, from the school cumulative records, were compiled on coding sheets for testing the four hypotheses of this study. The BMDX70 program was used to test the significance of differences between the two groups in comparing the following: attendance in grade five, attendance in grade seven, reading achievement in grade six, and the number of children in each family.

Furthermore, data collected from the cumulative records were used to construct tables to answer three questions presented in this study. These tables were used to compare the number of male with female dropouts, the number of dropouts in grade nine to the number of dropouts in grade ten, and retentions of dropouts to retentions of stayins.

There was no significant difference in the attendance of the dropout and the stayin in grade five. In grade seven, there was a significant difference in the means of the groups with an obtained t value of -3.65. Reading achievement in grade six showed a significant difference with a mean difference of approximately two grade levels. The obtained t value was -4.07. The number of children in each family showed a difference only at the .05 level with an obtained t value of 2.06.

Data, in this study, revealed more male than female dropouts and grade nine as having more dropouts than any other grade. Also, a large percentage of the dropouts had been retained one or more grades.

Included in this study were brief telephone interviews with a sampling of the dropouts. The major conclusions drawn from the interviews were that mar-

riage was a major reason for the female dropouts and the males had a general feeling of having lost interest in school.

Craig, Gordon (Specialist in Education, June, 1974)

ADMINISTRATIVE POLICY MANUAL GORDON COUNTY SCHOOL SYSTEM

This study was an effort to develop an administrative policy manual for the Gordon County School System. Pertinent literature on the subject was reviewed. System for classifying school board policies was purchased from the National School Boards Association. This system was used as a guide in coding board policies, administrative rules, and exhibits by letter and by color. Binders purchased from the National School Boards Association were used in dividing the manual into thirteen areas with each area including a code finder for that particular section. A code finder for the entire manual is found near the end of the manual.

Clark, William R. (Specialist in Education, June, 1974)

A STUDY COMPARING TWO METHODS OF TEACHING COMPOSITION IN HIGH SCHOOL

The purpose of this study was to determine whether students write better compositions when writing is related to literature which has been studied and discussed in class rather than when writing is based on extemporaneous topics assigned by the teacher without previous study or discussion.

The *t* test was used to determine the significance of differences between scores on literary compositions and on extemporaneous compositions. The dependent variables included organization, grammar, spelling, punctuation, and diction. A correlation technique was employed to determine the relationship between each of the dependent variables (organization, grammar, spelling, punctuation, and diction) and each of the independent variables (sex, high school average, English average, and IQ).

A composition class composed of sixteen college preparatory seniors at Douglas County High School served as the subjects for this study. The results of this study reveal that there are no statistically significant differences between the student scores on literary and extemporaneous compositions in respect to organization, grammar, punctuation, spelling, and diction. The study further points out a significant positive relationship between organization and IQ, between the total scores and IQ, between grammar and high school average, between punctuation and high school average, between diction and high school average, between the total scores and high school average, between organization and English average, between punctuation and English average, and between the total scores and English average.

Frew, Sam (Specialist in Education, June, 1974)

A STUDY OF THE RELATIONSHIP BETWEEN SELECTED VARIABLES AND INTEREST IN SOCIAL STUDIES AMONG HIGH SCHOOL STUDENTS

This study was an effort to consider certain factors that might influence student choices of social studies courses. Students were selected from English classes at Cedartown Comprehensive High School during Fall Quarter of 1973. Three hundred students were given the test "A Scale to Measure Attitude Toward Any School Subject, Form A," by H.H. Remmers.

From these three hundred students, thirty were selected who showed the highest interest in social studies, and thirty were selected who showed the lowest interest in social studies. These students were compared on the basis of the following variables: intelligence quotient, grade point average, reading scores, educational level of the mother, and educational level of the father. For the entire three hundred students, correlations were run between each of the independent variables of sex, race, grade level, rating of news programs, availability of newspapers, and the dependent variable of interest in social studies.

The students with high interest in social studies appear to have slightly higher intelligence quotient scores, grade point averages, reading scores and higher educational level of parents, than do students with lower interest in social studies. However, only in the areas of educational level of the mother and reading ability scores were there significant differences at the .05 level.

Hart, Jan Rowland (Specialist in Education, June, 1974)

THE EFFECT OF POSITIVE REINFORCEMENT ON THE VERBAL BEHAVIOR OF A WITHDRAWN CHILD IN A COUNSELING SITUATION

Two withdrawn children were identified in order to observe the effect of positive reinforcement on verbal behavior. One child served as the experimental subject and the other as the control subject. Observation of the children in their classroom for six sessions produced a baseline of their rates of verbal behavior in that setting. An ABAB research design was used for the twenty half-hour experimental sessions. Positive reinforcement in the form of the emission of statements of a positive nature, the establishment of eye contact, and the presentation of candy was administered on a CRF schedule for the emission of verbalizations. After the experimental phases the two subjects were again observed in the classroom to compare their rates of verbalizations. The number of verbalizations increased during the experimental sessions when positive reinforcement was administered, and the increase in verbal behavior generalized to the classroom setting for the experimental subject. The rate of verbal behavior for the control subject remained relatively unchanged.

Holton, Barbara Sanders (Specialist in Education, June, 1974)

THE EFFECTS OF LISTENING EXERCISES ON THREE LEVELS OF SIXTH GRADE READING

This study was made to determine whether listening exercises would improve listening and reading comprehension. Three exercises a week were given for ten weeks, using reading comprehension material.

The sixty-five subjects were members of three achievement-grouped sixth grade classes.

Subjects in the group reading on an early eighth grade level at the end of the year made no significant gains in either listening or reading comprehension.

Subjects in the group reading on an early sixth grade level at the end of the year made significant gains in both listening and reading comprehension.

Subjects in the group reading on an early fourth grade level at the end of the year made significant gains in reading comprehension, but not in listening.

A paired comparison method was used to test the differences between the pretests and posttests.

An analysis of covariance showed no significant difference in gains among the groups.

Hudson, Charles E. (Specialist in Education, June, 1974)

A STUDY OF THE AVAILABILITY OF COMMUNITY RESOURCES IN ROME AND FLOYD COUNTY FOR USE IN CAREER EDUCATION AT WEST CENTRAL ELEMENTARY SCHOOL

To determine the availability of community resources for the students and teachers of West Central Elementary School, the writer surveyed and evaluated the educational resources in Rome and Floyd County. The objectives of the study were: (1) to evaluate and list the various types of resources available; (2) to collect and organize the information concerning the availability of community resources; (3) to compile the results of the study to indicate the different ways that the community resources could be used.

After the study of related literature, inquiries were sent to school systems throughout the United States for suggestions and materials that could be used in the study. In the early part of 1974, the writer sent questionnaires to industries, agencies, and institutions for information as to the availability of their resources or resource persons and their willingness to cooperate with the schools. Provisions were made for the respondents to indicate the different pertinent information that was important for the study. The writer concluded the research study by providing collected data for each staff member of West Central Elementary School showing: (1) the availability of the different resources and the different ways they can be used; (2) procedures for teacher usage of community resources; (3) evaluation forms to determine educational value of field trips and resource persons.

The results of the study were presented to the staff of West Central Elementary School during May of the school year 1973-74. Although there were indications that these results were going to increase the usage of community resources, the effectiveness of the study can only be determined after the school year 1974-75.

Keller, B.J. (Specialist in Education, June, 1974)

THE DEVELOPMENT OF AN EXPEDIENT METHOD OF SCHEDULING FOR SECONDARY SCHOOLS OPERATING ON THE QUARTER SYSTEM

A problem that is ever present with the secondary principal is the challenge of scheduling. This ever present problem was compounded even more with the evolution of the quarter system on the secondary level. A task that was completed only once during the school year must now be completed three or four times under the quarter system. This increased scheduling dictated the need for a more expedient method of scheduling. The problem as identified by this study was to develop an expedient method of scheduling.

The conclusion that emerged from this study is that most schools use a college type of registration when scheduling on the quarter system. The college type of registration is the type of registration in which a student has preselected a list of courses. With this list the student goes to various departments to acquire a class card which will permit his enrollment in that class. In the college type registration class size is controlled by predetermined number of class cards. In this type of registration the student must make his own schedule, alternate schedule, and select his preferred classes and teachers. The expenses of using the computer type of scheduling precludes its use in most schools. There also is an inherent problem with computer scheduling, this being the difficulty of proper programming. The college type of scheduling was not only the most expedient but the least expensive. The individual method involves many more man hours than does the college type of scheduling. The cost of McBee-Key Sort cards or computer scheduling is greater than the college type since the only expense involved in the college type of scheduling is the reproduction of class cards. This reproduction can be accomplished with a mimeograph machine. The flexibility of choice provided the students and the ease of registration make the college type of scheduling the most desirable.

Kelley, Dana C. (Specialist in Education, June, 1974)

A STUDY OF THE RELATIONSHIP BETWEEN SELECTED VARIABLES AND INTEREST IN SOCIAL STUDIES AMONG ELEMENTARY SCHOOL STUDENTS

The problem of this study was to determine if there is any relationship between certain characteristics of students and the students' interest in social studies. The characteristics that were analyzed were the intellectual variables of grade level achievement, grade point average, reading ability and social studies competence and the non-intellectual variables of parents' educational level, family income, reading and media materials in the home, and the student's sex.

The subjects used in the study were sixty seventh grade students. Thirty of these pupils were classified as those with high interest in social studies and thirty of these students were classified as those with low interest in social studies. Student's t-test, chi squares, and proportionates were run to determine if there was a significant difference between the two groups. The .05 level was used as

the significant level.

The following conclusion was drawn: Only in the relationship of sex and interest in social studies was a significant statistical difference found.

Kirk, Joan H. (Specialist in Education, June, 1974)

THE EFFECT ON ACHIEVEMENT AND ATTITUDE OF A SELF-SELECTION READING PROGRAM ON SIXTH GRADE STUDENTS

This study was designed to provide experimental data on the effectiveness of the self-selection approach to reading. The research design was a non-randomized pretest posttest control group design (Van Dalen, 1973). The experimental group was a class of sixth grade students reading approximately on grade level. This class was taught using a self-selection approach to reading.

The control group was a class of sixth grade students reading approximately on grade level. This class was taught using the MacMillan Basal Reading Program.

Alternate forms of the *Comprehensive Test of Basic Skills,* reading battery, were given to measure gain in comprehension and vocabulary. Thomas H. Estes' *A Scale to Measure Attitude in Reading* was administered to measure any change in attitude. The *t* test was computed to determine any statistical difference between the mean gains of the two groups.

The null hypothesis that there would be no gain in vocabulary between the two groups was not rejected. The null hypothesis that there would be no gain in Comprehension between the two groups was not rejected at the .05 confidence level but could have been rejected at the .01 confidence level. The null hypothesis that there would be no significant change in attitude between the two groups was rejected. The control group results showed a mean decrease in reading attitude of -0.90 while the experimental group showed a mean gain in reading attitude of 5.16. This proved to be a statistically significant difference at the .01 confidence level.

Latson, Virginia Hine (Specialist in Education, June, 1974)

THE RELATIONSHIP OF BAROMETRIC PRESSURE AND HUMIDITY TO THE LUNCHROOM NOISE LEVEL OF PRIMARY CHILDREN

To determine any significant relationship of lunchroom noise level, as a criterion, to barometric pressure and humidity, as dependent variables, the primary lunchroom sound of Southeast Elementary School in Rome, Georgia was tape recorded via the intercom system for a thirty minute period over a nineteen school day span. Barometric pressure and humidity readings from a television weather channel were recorded at the time of each lunch period.

At a later time the lunch sound tape was used in a recorder plugged into a Western Electric 3A Noise Level Meter, and readings were taken on a two minute interval schedule to arrive at an average sound level for each testing day. Barometric pressure was related with the average lunchroom sound level for the nineteen day period in the Pearson product moment formula and showed $r = .076$ in the simple relationship. Humidity, as the dependent variable, was

similarly treated with noise level as the criterion, and the simple relationship was .045. Both relationships were not significant at the + 1 reading as perfect positive correlation. A multiple correlation of three variables with noise level, as the criterion, and barometric pressure and humidity, as dependent variables, to determine any joint significance in the relationship (read as high correlation at + 1.00) was $R_{1\,23} = .094$. No statistically significant relationships were found.

Lee, Wayne (Specialist in Education, June, 1974)

A STUDY OF THE RELATIONSHIP OF SELECTED VARIABLES AND THEIR INFLUENCE ON STUDENT INTEREST IN SOCIAL STUDIES IN COMPARISON WITH OTHER ACADEMIC AREAS

This study considered factors that influence student's interest in social studies courses in relationship with their interest in the academic areas of English, math, and science. Students were selected from tenth, eleventh, and twelfth grade English classes at Cedartown Comprehensive High School during the fall quarter of 1973. Three hundred students were given H.H. Remmer's test "A Scale to Measure Attitude Toward Any School Subject", Form A.

The following results were found to be statistically significant:

1. The educational level of the mothers of students with high interest in social studies but low interest in math was higher than the educational level of the mothers of the students with low interest in social studies and a high interest in math.
2. When choices were made in relationship to high interest in social studies and high interest in English, boys expressed an interest in social studies and girls expressed an interest in English.
3. When choices were made between high interest in social studies and high interest in science, girls expressed interest in social studies and boys expressed interest in science.

Lott, Mildred D. (Specialist in Education, June, 1974)

THE EFFECTS OF TEACHER ATTITUDE UPON THIRD AND FOURTH GRADE SLOW LEARNERS USING PROGRAMMED READING

This study was designed to compare the gain of slow learners using Programmed Reading taught by a teacher who was willing to work with such pupils to the gain of slow learners using Programmed Reading taught by a teacher who preferred to work with more capable pupils. Subjects were divided into two groups; a third grade group who received instruction from the teacher with the negative attitude and a fourth grade group who received instruction from the teacher who volunteered to work with them.

Subjects were given the California Short Form Test of Mental Maturity. The pretest for both groups was the Iowa Test of Basic Skills—Form 1, and the posttest for both groups was the Iowa Test of Basic Skills—Form 3. The testing was conducted by the researcher. The three areas tested were total reading, vocabulary, and comprehension. There were significant differences at the .01

level of confidence in gain between the two groups in all three areas, therefore, it is felt that only those teachers who are willing to work with slow learners can do so effectively.

Marsh, Edwin Earl (Specialist in Education, June, 1974)

PAINLESS POETRY FOR NINTH GRADE BOYS: A COURSE DESIGN

This project is a design for a quarter course in poetry especially for ninth grade boys attending LaGrange Boys' Junior High School in LaGrange, Georgia. The course is based on the fact that most young people are very fond of modern music. This modern music, with much stress placed upon the lyrics, is used as an introduction to poetry in general. The assumption is that the students are able to see the similarity between the lyrics of songs and the words of poems.

Included in the design for this course called "The Beatles, Before and After: Words and Music," are the rationale and purpose, behavioral objectives, a general outline for the course, detailed weekly lesson plans for the teacher (including materials, selections, activities, and evaluation procedures), and some conclusions concerning the effectiveness of the course which was actually taught the winter quarter of 1974.

Martin, Gerald Curtis (Specialist in Education, June, 1974)

A STUDY OF THE DEVELOPMENT OF COMMUNITY EDUCATION AND ATTITUDES OF SELECTED CURRENT PARTICIPANTS TOWARD COMMUNITY EDUCATION IN COBB COUNTY, GEORGIA

This study focused on answering the following problem:

What were the developmental stages that community education passed through in Cobb County, Georgia, and what are the views and attitudes of current participants toward selected areas of the program?

The following areas were explored by a review of the selected literature since 1955:

1. The philosophical bases of community education on a national level.
2. Strengths and weaknesses of community education.
3. The importance of positive school-community relationships in regard to implementing community education.

The following areas were explored by a review of Cobb County Board of Education Minutes (1966-1973), interviews with key individuals, and a study of Cobb County reports and studies:

1. The conditions under which the first community education planning was completed in Cobb County, Georgia.
2. The developmental stages that community education in Cobb County passed through from planning to systemwide implementation.

A questionnaire was developed and administered to current participants at four community schools in Cobb County in order to attempt to identify their attitudes toward certain selected areas of the Cobb County Community School Program. The four schools chosen represented four geographical locations in the county. The total participant populations, as far as possible, in three schools

were surveyed, while the random selection process was used to select a sample of 100 participants from the large population of the other school.

The data results from over 550 questionnaires were compared between the four participating schools on an item percentage basis. The data was further tabulated between each of the four schools for comparison purposes and to assist in testing the following hypothesis:

1. There will be more females in the participating schools than males.
2. There will be more participants in the age groups 13 to 30 years of age.
3. Items one through five on the questionnaire, dealing with program structure, will result in higher percentages of "Strongly Agree" and "Agree" responses per item than will any of the other questionnaire items per school.
4. Items eleven and twelve on the questionnaire, dealing with program evaluation, will have a higher percentage of "Disagree" and "Strongly Disagree" responses than any other items on the questionnaire per school.
5. The combined "Disagree" and "Strongly Disagree" responses for all fourteen items on the questionnaire will result in less than three per cent of the participants per school when averaged per school.
6. Due to the fact there will be many first quarter participants and the questionnaire will be given the first week of classes, there will be at least 25 per cent "No Opinion" responses on some questionnaire items for each school.

The data results showed very high positive responses on most questionnaire items. Those questionnaire items that did not show extremely high positive responses showed high "No Opinion" responses. The negative responses were under three per cent on all questionnaire items when the fourteen questionnaire items were averaged on a per item possible negative response basis.

Moss, James P. (Specialist in Education, June, 1974)

AN ANALYSIS OF ATTITUDINAL CHANGES OF FIFTY SENIOR ENGLISH STUDENTS AFTER THE TEACHING OF SPECIFIC WORKS OF WILLIAM FAULKNER

The purpose of this study was to determine, by means of scores made on a pretest and a posttest, the relationship between the teaching of specific works by William Faulkner and students' attitudes about nature, the family as an institution, marriage and elders. A correlation technique, using the 0.05 level of confidence, was used to determine if there was a significant change in students' attitudes after being taught specific works by William Faulkner, if there was a significant difference in scores made by males and females, and if there was a significant relationship between I.Q. scores and posttest scores.

A group of fifty students at Coosa High School in Floyd County, Georgia, was used as the population. The findings showed a positive change in students' attitudes, after they were taught specific works by William Faulkner, concerning nature, the family as an institution, marriage, and elders. There was not a significant difference between the scores made by males and females on the posttest. In addition, there was not a direct relationship between I.Q. scores and posttest scores.

Musick, Peggy Entrekin (Specialist in Education, June, 1974)

A STUDY TO ESTABLISH A LEVELING PROCEDURE WHEREBY STUDENTS IN THE BOWDON ELEMENTARY SIXTH AND SEVENTH GRADES MAY BE PLACED ACCORDING TO THEIR MUSICAL ABILITY AS THEY ARE PLACED BY SIMILAR PROCEDURES IN THE READING PROGRAM OF BOWDON ELEMENTARY SCHOOL

The purpose of this study was to run a correlation between the music achievement scores on the Selmer Music Guidance Survey and the reading achievement scores on the Iowa Tests of Basic Skills to determine the feasibility of doing a reading test as a general music placement test at Bowdon Elementary School.

Using the table of random numbers, ten students were chosen from each sixth and seventh grade reading group, giving a sample population of eighty. The Spearman *r* showed significant positive correlation in the high sixth grade reading group. In the other reading groups, the correlation was not significant.

Poort, Hilda C. (Specialist in Education, June, 1974)

DETERMINING THE EFFECTS OF A SMALL GROUP TUTORING PROGRAM BY A READING SPECIALIST AND TEACHING AIDE ON SELECTED FOURTH GRADE PUPILS

This study involves a research project in which a reading specialist and a teaching aide worked with pupils in small groups to help increase listening skills, vocabulary, word analysis, reading comprehension, self-concept and reading attitude.

Ten children were chosen by teachers as being two or more years behind in reading skills. This group formed the experimental group. Ten children who were two or more years behind in reading were chosen as a control group. The experimental group worked thirty minutes a day each school day with a reading specialist and teaching aide. The control group received regular reading instruction from their classroom teacher. The experimental group received classroom instruction in reading from their teachers and also received supplemental reading instruction from the reading specialist and teaching aide.

As an evaluation, Level 8 Form 5 and Form 6 of the Iowa Tests of Basic Skills and the Self-Concept Scale were administered as pretests and posttests. To learn if there were any significant statistical differences between the mean changes of the groups in listening skills, vocabulary, word analysis, reading comprehension, and self-concept, *t* tests were computed. The results of the *t* tests indicated that there were no significant statistical differences between the groups on the five hypotheses mentioned above. The first five hypotheses were rejected. The .05 level of confidence was selected as the level at which results would show significant statistical difference. The attitude of the control group toward reading was more favorable than that of the experimental group toward reading. The results of the *t* test concerning attitude toward reading revealed no significant statistical difference between the experimental and control group.

Rogers, Jasper E. (Specialist in Education, June, 1974)

A STUDY OF THE ATTENDANCE HABITS OF WHITFIELD COUNTY, GEORGIA STUDENTS IN GRADES SIX THROUGH TWELVE

The purpose of ths study was to study the attendance habits of students, to determine differences in the attendance habits, if they existed and to make recommendations for possible improvement in student attendance in Whitfield County Schools.

The subjects of the study were students selected at random from the two attendance areas of Whitfield County. The subjects represented 7.11 percent of the total school population enrolled in grades six through twelve in Whitfield County Schools.

Descriptive research was used in the study. The data were collected by voluntary participation of the students in completion of a survey. The survey asked for student response on socio-economic conditions, attitude concerning school, reason for absence, school likes and dislikes, as they related to each participant.

Selby, Barbara Bounds (Specialist in Education, June, 1974)

A COMPARISON OF FRESHMEN AND SENIOR RESPONSES TO THE GEORGIA GUIDANCE SERVICES INVENTORY

This study compared the perceptions held of guidance services by high school freshmen and seniors. The Georgia Guidance Services Inventory was the instrument used. The populations responded to questions regarding what is occurring and what should be occurring. Mean factor scores were examined. Findings indicated a need for expanding guidance services by (1) making counselors and guidance services more accessible to students; (2) providing more adequate orientation to guidance services for freshmen; (3) identifying specific needs of girls; (4) broadening the scope of services for seniors.

Shelnutt, Carolyn Corry (Specialist in Education, June, 1974)

A COMPARISON OF ACHIEVEMENT OF ELEMENTARY SCIENCE STUDENTS IN PROCESS VERSUS TEXTBOOK CENTERED CLASSROOMS

This research study was designed to report and compare findings of a research study which was to investigate scientifically the value of teaching science in a process oriented classroom compared to that of using a more traditional textbook method.

Subjects used in the study were students of four third grade classes with an IQ range of 70 to 136. Two of these four classes made up the experimental group. The other two classes composed the control group. Both groups contained fifty students. The subjects of the experimental group and the control group were similar in age, sex, and economic status.

A teacher-made test was used in the study. A total test score of forty was possible with each correct response receiving one point. The same test was administered as a pretest and posttest.

The pretest was given to all students involved in this study on December 12, 1973. A posttest was given to all the students on May 13, 1974 at the end of the sixteen week treatment period.

The null hypothesis was tested by Analysis of Covariance (ANOCOVA).

The null hypothesis was not rejected as the F ratio did not attain .05 level of confidence.

The conclusion was that the textbook used increases process and concept development whether used by students in small groups or by teacher demonstration with the control group.

Further study is needed in order to detect significant difference in process development alone.

Sirmali, Edna E. (Specialist in Education, June, 1974)

THE EFFECTS OF A SELF-CONCEPT ENHANCEMENT PROGRAM ON SELF-CONCEPT TEST RESULTS OF A THIRD-GRADE CLASS

This study was designed to provide experimental data on the effectiveness of a classroom teacher to change pupil's self-concept through teaching self-rewarding behaviors. The change was judged by self-report self-concept tests.

The research design of this study was the nonrandomized control-group pretest-posttest design in which two intact third grade classes were used.

In the experimental class the teacher verbally modeled praise for self and others in a realistic setting. She directly taught pupils to evaluate, to set reasonable goals, and to praise self and others. The program was within the communicative and computational skills class study plans although certain times were scheduled for self-concept growth activities. The control group maintained their normal schedule.

The Piers-Harris Self-Concept Test and the Pictorial Self-Concept Test were used for comparison. Both scales used the categories by Jersild (1952) of self-concept. These two tests were given as pretests and posttests. The treatment period was six months.

In general, results of analyses suggested that the self-concept enhancement program was responsible for moderate changes in test scores. The Pictorial Self-Concept Scale Tests' comparison was significant at the .05 level. The Piers-Harris Self-Concept Scale Tests's comparison was not statistically signigicant although there was some raw score gain.

Smith, Paul Hamilton (Specialist in Education, June, 1974)

A STUDY TO DETERMINE IF THERE IS A SIGNIFICANT DIFFERENCE BETWEEN THE BASIC EDUCATIONAL LEVEL OF THOSE STUDENTS WHO DROP-OUT OF THE BUSINESS EDUCATION PROGRAM AT THE CARROLL COUNTY AREA VOCATIONAL TECHNICAL SCHOOL AND THOSE WHO COMPLETE THE PROGRAM

The purpose of this study was to determine if a significant difference existed between the basic educational levels of students who drop-out and those who complete the accounting, secretarial science, and clerk typist programs in the Business Education Department at the Carroll County Area Vocational School as measured by the Test of Adult Basic Education. A *t* test of independent mean was computed on reading, mathematics and language subtest scores. The *t* test revealed that a significant difference does not exist.

Witherow, Jimmie W. (Specialist in Education, June, 1974)

THE ROLE OF THE MIDDLE SCHOOL

The development of the middle school was one of the most significant educational events of the last decade. This study was conducted to define the role of the middle school in Whitfield County. It was the purpose of this study to define the role of the middle school in regard to (1) the purpose and developmental background, (2) the instructional program, and (3) the organization and administration.

The developmental background of the junior high school and the emergence of the middle school is presented from a review of the literature. Consideration is given to the purposes, growth, and characteristics of the junior high school. The middle school emerged due to failures and criticisms of the junior high, changes in the nature of the learner, and innovations in the educational program.

A reorganization of the grade pattern in a school system provides an opportunity to re-evaluate the curriculum for the total program for grades K-12. Consideration is given to (1) some of the concerns expressed in the literature in regard to the objectives and purposes of the curriculum for the middle school; (2) the recommendations on instruction in the Comprehensive Study Report to the Whitfield County Board of Education; and (3) the reports from the study committees which were appointed by the Whitfield County Board of Education to define the educational program.

The most typical middle school program is found in a 5-3-4 or 4-4-4 organizational pattern. A study is presented on the grade organizations in the local school systems in Georgia. The information was obtained by a review of two educational directories which were prepared by the State Department of Education.

A framework for the curriculum for the middle schools in Whitfield County is proposed. In conclusion some statements regarding the middle school are also presented.

Whitfield County may be regarded as a system which capitalized on reorganization to provide adequate facilities and reevaluate the curriculum to provide learning opportunities in the total instructional program for grades K-12.

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The purpose of this publication is to provide encouragement for faculty research and to make available results of such activity. The *Review*, published annually, accepts original scholarly work and creative writing. West Georgia College assumes no responsibility for contributors' views. The style guide is Kate L. Turabian. *A Manual for Writers*. Although the *Review* is primarily a medium for the faculty of West Georgia College, other sources are invited.

An annual bibliography includes doctoral dissertations, major recitals and major art exhibits. Theses and articles in progress or accepted are not listed. A faculty member's initial listing is comprehensive and appears in the issue of the year of his employment. The abstracts of all master's theses and educational specialist's projects written at West Georgia College are included as they are awarded.

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THE EFFECTS OF AN INSERVICE CREATIVITY WORKSHOP ON TEACHERS AND THEIR STUDENTS

by ELLEN GRUBER* and JEFFREY L. LORENTZ**

In recent years a number of educators have moved from an instructional approach which considers only student cognition to an awareness of the need to attend to the affective domain. There is an increasing realization of the need to assist teachers in fostering an affective environment in their classrooms. One approach to this end is the inservice program.

The purpose of the present study was to examine the effects of an Affective and Creative Education inservice program on teacher attitudes and subsequent changes in student attitudes and creativity. Specifically, the study was designed to consider whether a workshop in affect/creativity would result in changes in teacher openness, student creativity, and student self-concept.

METHOD

Subjects. The subjects of the present study were eighteen first grade teachers from Carrollton and Carroll County, Georgia, who volunteered to participate. Ninety students were obtained by randomly selecting 5 from each of the 18 classrooms. As a condition of participation, each teacher agreed to the administration of student measures both one week before the workshop began and four weeks after the workshop ended. The teachers also agreed to respond to several measures before and after the workshop.

Instruments. I Feel — Me Feel (IFMF) (Yeatts and Bentley, 1970) was given to the 90 students one week before and four weeks after the workshop. This 40-item Likert-type scale (using five faces which ranged from happy to sad rather than numbers) is a self-concept measure appropriate for use with children at this level.

Scoring was based on locally-developed factor keys which were entitled: Academic, Self, Frustration, Femininity, Fun, and Independence. Coefficient Alpha reliabilities for these scales ranged from .56 to .92 for the pre-test sample.

The *Torrance Tests of Creative Thinking* (TTCT) (Torrance, 1966) were administered along with the IFMF. TTCT is a measure of creativity, a test developed over a number of years. A number of studies report reliabilities ranging from .50 to .93, and Torrance

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(1972) reports nine studies in which TTCT scores were used to predict other student outcomes.

The four subtest scores are fluency, flexibility, originality, and elaboration. Figural forms A and B were used.

The *Rokeach Dogmatism Scale* (RDS) (Rokeach, 1960) was administered to each teacher before and after the workshop. Dogmatism as defined by Rokeach is a closed way of thinking which can be associated with any ideology. This scale is designed to measure individual differences in openness or closedness of belief systems. The reliability coefficient (split-half, Spearman-Brown) for the Dogmatism scale, Form E, is .81 based on a group of 80 English colleges. When intercorrelated with Form F among Dogmatism, Authoritarianism, and Ethnocentrism, the R = .62 based on 80 English colleges. Total score is obtained by summing the responses to the 40 items.

A group of specially trained testers administered both the IFMF and TTCT away from the teachers' classrooms.

Treatment. The eighteen first grade teachers participated in a two-day intensive training program designed to foster affective growth in themselves and subsequently in their students. The workshop focused on the following areas: affective exercises in trust, awareness, and communication; transactional analysis; and creativity exercises centered on flexibility. The aim of the workshop was to equip each teacher with skills and a variety of techniques to facilitate the development of an affective curriculum for children. The teachers followed up the workshop via implementation of an affective and creative curriculum for their students.

During the four weeks before the end of the final testing, the teachers' classes were monitored for one hour once a week to check on the implementation of the techniques taught in the workshop. Trained observers marked a check list in order to obtain additional data on the implementation.

Analysis. The RDS were hand scored and a total pre-test, total post-test and difference score recorded for each teacher. A correlated t-test was used to test the difference between pre-RDS and post-RDS. Table 1 presents the results of this test, which show that the difference between pre-test and post-test is not significant.

Table 1

RDS Means and Standard Deviations

Test	Mean	Standard Deviation	t
Pre-workshop	135.39	29.01	
Post-workshop	135.05	35.80	0.06

Student IFMF and TTCT subscales were reduced to gains by regressing pre-test on post-test and subtracting the obtained post-test score from the predicted ("expected") post-test score and further reducing these gains to classroom means. The 10 scores were then used as a measure of teacher influence on student self-concept and creativity. Teachers were subsequently contrasted on these scores through a series of discriminant analyses (Veldman, 1967). In the first of these, the eighteen teachers were ranked according to their initial (pre-test) RDS score and the nine high scoring teachers were contrasted against the nine low scoring teachers. Likewise, the final (post-test) RDS and the difference between pre and post were used in the same manner.

The results of these three analyses are shown in Tables 2 and 3.

TABLE 2

SUMMARY OF 3 DISCRIMINANT ANALYSIS
CONTRASTING GROUPS OF IFMF & TTCT

ANALYSIS	WILKS LAMBDA	F	df	X^2	P
1. High vs Low Pre-RDS	0.292	1.700	10.7	—	0.2466
Root 1 (100% of variance)			10	14.787	0.1415
2. High vs Low Post RDS	0.345	1.317	10.7	—	0.3669
Root 1 (100% of variance)			10	12.698	0.2421
3. High vs Low Change in RDS	0.295	1.674	10.7	—	0.2533
Root 1 (100% of variance)			10	14.653	0.1467

TABLE 3

GROUP MEANS AND UNIVARIATE F-TESTS FOR 10 STUDENT VARIABLES

Variable	High RDS Group Mean	Low RDS Group Mean	F—ratio df = 1,16
Analysis 1. Pretest RDS			
IFMF			
1. Fun	48.3678	52.5913	5.1235
2. Academic	48.9251	48.9595	0.0005
3. Frustration	11.5837	13.4830	3.9879
4. Femininity	11.8674	12.4605	1.0411
5. Self	22.4306	24.2419	1.7424
6. Independence	10.7063	11.0446	0.2299
TTCT			
7. Fluency	21.8952	24.1943	0.9449
8. Flexibility	12.1718	12.5993	0.0870
9. Originality	8.7112	9.1544	0.0261
10. Elaboration	16.8456	15.0086	0.6984
Analysis 2. Posttest RDS			
IFMF			
1. Fun	49.9014	51.0578	0.2965
2. Academic	48.6697	49.2150	0.0586
3. Frustration	11.7583	13.3084	2.4520
4. Femininity	12.0920	12.2359	0.0578
5. Self	23.2718	23.4006	0.0083
6. Independence	10.6760	11.0749	0.3213
TTCT			
7. Fluency	23.7375	22.3520	0.3311
8. Flexibility	13.1045	11.6667	1.0424
9. Originality	10.8235	7.0421	2.1533
10. Elaboration	17.9931	13.8612	4.2937
Analysis 3. Difference RDS			
IFMF			
1. Fun	49.9444	51.0148	0.2538
2. Academic	48.9630	48.9216	0.0005
3. Frustration	12.2194	12.8473	0.3567
4. Femininity	12.1214	12.2065	0.0199
5. Self	23.6229	23.0495	0.1595
6. Independence	10.6471	11.1038	0.4242
TTCT			
7. Fluency	24.0271	22.0624	0.6793
8. Flexibility	12.4679	12.3033	0.0129
9. Originality	9.8231	8.0425	0.4322
10. Elaboration	17.3394	14.5149	1.7554

These results indicate that the groups did not differ significantly on any of the measures.

CONCLUSION

The present study was undertaken to determine the effects of an affective workshop on teacher openness and on student' creativity. The results indicate that there has been no significant impact of the workshop on either teachers or their students.

The Affective Education workshop did not lead to significant differences between groups on teacher openness and subsequent creativity measures in students. The workshop may well have been effective in changing openness and creativity of teachers and students, but this study did not demonstrate that.

The length of the affective workshop may be a critical factor. The length of time spent by teachers implementing the affective curriculum in their classroom may be a critical factor. Research should be undertaken in which such factors as size of the workshop, duration of the workshop, and specific activities are varied.

It is possible that long term effects of the affective and creative education inservice program on teacher attitudes and subsequent changes in student attitudes and creativity will be evident over a longer time period. For this reason teachers should not expect in a short time too great a change in themselves or their students. Personal growth is a slow process and individuals need time to experiment with and integrate new behavior and attitudes into their lives. Teachers should not become discouraged too quickly when their students do not respond with immediate or dramatic new behaviors and attitudes as a result of their focusing on the affective domain. For both teachers and students, it appears, change may occur but slowly. Patience seems to be a vital virtue in affective education.

RELATIVITY AND THE UNIVERSE OF FICTION

by FRANK SADLER*

> And when his friend Janos Plesh commented years later that there seemed to be some connection between mathematics and fiction, a field in which the writer made a world out of invented characters and situations and then compared it with the existing world Einstein replied: "There may be something in what you say. When I examine myself and my methods of thought I come to the conclusion that the gift of fantasy has meant more to me than my talent for absorbing positive knowledge."
>
> RONALD W. CLARK
> *Einstein: The Life and Times*

In this essay I will examine what seems to be a connection between the invented worlds of mathematical physics and fiction in terms of Samuel R. Delany's *The Einstein Intersection.*[1] It is my belief that there exists a relationship between these two worlds and that *The Einstein Intersection* is a literary expression of that relationship. If it seems that I am making some special claim for science fiction, I am not. I am only pointing out that science fiction is a type of literature and, as such, that it must be initially judged by the standards of that literature. It should be remembered, then, that there is nothing inherently difficult in understanding the the relationship that exists between mathematical physics and fiction as long as we recognize that *The Einstein Intersection,* like any literary work of art, "is governed by precisely the same literary and dramatic requirements as any other form of literature."[2] The problem, insofar as it may be a problem, resides in the form of a novel. Alain Robbe-Grillet points out that "A new form will always seem more or less an absence of any form at all, since it is unconsciously judged by reference to the consecrated forms."[3] Essentially, the problems of *The Einstein Intersection* are related to the problems of form. Since most of what will be discussed in this essay relates directly or indirectly to form, it would seem wise tentatively to define what is meant by that term. Yet definition itself seems somehow inadequate to deal with the problems of form since, as Charles W. Misner points out in *Gravitation,*

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[1] Samuel R. Delany, *The Einstein Intersection,* New York: Ace Books, 1967.

[2] Reginald Bretnor, "Science Fiction in the Age of Space" in *Science Fiction, Today and Tomorrow,* New York: Harper & Row, Publishers, 1974, p. 151.

[3] Alain Robbe-Grillet, *For A New Novel,* New York: Grove Press, Inc., 1965, p. 17.

> . . . in science, as stressed not least by Henri Poincare, that view is out of date which used to say, "Define your terms before you proceed." All the laws and theories of physics . . . have this deep and subtle character, that they both define the concepts they use . . . and make statements about these concepts. Contrariwise, the absence of some body of theory, law, and principle deprives one of the means properly to define or even use concepts. Any forward step in human knowledge is truly creative in this sense: that theory, concept, law, and method of measurement—forever inseparable—are born into the world in union.[4]

Misner's view of the problem of definition in science constitutes a functional or operational definition of terminology. What is true for science is, perhaps, even more appropriate for the study of literature. Our critical vocabulary is woefully inadequate and our definition of the rather limited critical terms we do have, such as those found in Wayne C. Booth's *The Rhetoric of Fiction* and other works concerned with the long narrative, are often wanting with respect to precision. Nevertheless, for the purpose of exigency, I shall use Charles Olson's definition of form, that is, "FORM IS NEVER MORE THAN AN EXTENSION OF CONTENT", as a starting point.[5] What is being suggested is that the forms a novel may take grow out of the ideas and concepts, both implicit and explicit, which reside in it. Form and content are not antithetical concepts. Rather, form expresses an "extension" of certain ideas and concepts which, because of their particular expression, find themselves arranged in a particular pattern or relationship. This pattern or relationship we call a novel.

In brief, Delany has invented quite freely a new form for the science-fiction novel. The traditional divisions of the novel into separate and clearly discernable chapters are gone and in their place the narration is briefly interrupted by quotations from the author's journal, quotations from various literary, religious, philosophical, and scientific sources, and quotations from other fictional works of art. These quotations serve an important function in the structure of the novel since they provide a series of points that force the reader to relate the story to his own time. For instance, at the beginning of the second section of *The Einstein Intersection,* Delany provides us with a rather lengthy description of his impressions of a week's stay in Venice and relates this stay to his problems in "trying to assimilate . . . Lobey's adventure," though he admits that he doesn't "quite know how" these problems of assimilation will be worked out yet (pp.

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[4] Charles W. Misner, Kip S. Thorne, and John A. Wheeler, *Gravitation,* San Francisco: W. H. Freeman and Company, 1973, p. 71.

[5] Charles Olson, "Projective Verse", in *Human Universe and Other Essays,* Donald Allen, editor, New York: Grove Press, Inc., 1967, p. 52.

13-14). In other words, as Delany attempts to relate Lobey's story to his own time, we too, analogically, must relate Delany's experiences to our own. Delany in this particular section (and in others like it from his journal) attempts to establish a sense of aesthetic distance between the story the novel presents (it takes place in the distant future when man has left his planet and gone elsewhere in the universe) and the historical present. This relationship between the story the novel presents and the historical present is paralleled within the novel by the presence of a series of allusions and images that establish a continuity in time between the distant historical past when man still inhabited the earth, the immediate historical past which presents the narrator's own history and his knowledge of his race's history, the present, and the future. There is, perhaps, another and more important function these quotations serve and this function is intimately related to the form of the novel; that is, the quotations allow us to observe, in a limited sense, the author's view of how he understands the creative process and its relation to Lobey's story and *The Einstein Intersection.* For example, in a quotation from the author's journal at the beginning of section twelve, Delany informs us that "In a week another birthday, and I can start the meticulous process of overlaying another filigree across the novel's palimpsest" (p. 137). What Delany has presented us with is a description of the way in which he understands the process of his creation of the novel to have taken place. Further, the relationship that exists in the novel between mathematical physics and fiction is relatively complex since it involves an understanding of certain key concepts in contemporary physics. These concepts are presented within the novel and an understanding of their presence is crucial to any discussion of it. It would seem sensible, therefore, to examine what Martin Dyck in "Relativity in Physics and in Fiction" terms "some striking analogies" that exist "between physics and fiction," since I am dealing with the nature of fiction and, specifically, its relationship to physics and the world view implicit in *The Einstein Intersection.*[6] For it is only through coming to terms with the form of *The Einstein Intersection* that we may come to understand the relationship between the invented worlds of mathematics and fiction in the novel.

James B. Conant tells us that the mathematician or physicist "no longer pretends that he is dealing with reality, but accepts instead that he works with interlocking conceptual schemes—with

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[6] Martin Dyck, "Relativity in Physics and in Fiction", in *Studies in German Literature of the Nineteenth and Twentieth Centuries,* Siegfried Mews, editor, Chapel Hill: University of North Carolina Press, 1970, p. 174.

models—that are productive for a time but are constantly modified."[7] Further, it may be argued that "Few, if any writers would now insist that their fictional worlds reproduce reality. Instead the writer creates a model, an imitation, a symbolic construct through which he tries to capture the quality of human experience."[8] Since neither the physicist nor the writer pretends any longer that he is dealing with reality, the models he creates in his attempts to render the world intelligible may seem to be nothing more than a series of metaphors. These metaphors, however, are not taken from nature but have their source in the abstract principles of science.

Martin Dyck in his essay suggests that "In a basic sense, both fiction and physics are physics" (p. 174). Dyck's formulation about the analogical similarities between physics and fiction strike to the center of a particular twentieth-century problem in epistemology and ontology. The problem is not simply a matter of defining what we mean by fiction and physics. It involves what Thomas S. Kuhn in *The Structure of Scientific Revolutions* terms "incommensurable ways of seeing the world and of practicing science in it."[9] Further, it might be added, it involves a switch or change in the way in which the artist sees his function or purpose in his art and, therefore, in his world. Kuhn points out that "What a man sees depends both upon what he looks at and also upon what his previous visual-conceptual experience has taught him to see. In the absence of such training there can only be, in William James' phrase, 'a bloomin' buzzin' confusion' " (p. 113). The question which Dyck raises is "In what sense is physics fiction?" and declares "Well, what else is it? Truth? A physicist would object to such classification. Reality? Past the mid-twentieth century we are no longer so naive as to assume that there is such a thing as a definable reality" (p. 11). The reasons for this are not simple and involve the theory of relativity. Lincoln Barnett argues that "the irony of man's quest for reality is that as nature is stripped of its disguises, as order emerges from chaos and unity from diversity, as concepts merge and fundamental laws assume increasingly simpler form, the evolving picture becomes ever more remote from experience—far stranger indeed and less recognizable than the bone structure behind a familiar face."[10] Reality in modern physics

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[7] Thomas D. Clareson, "The Other Side of Realism", in *SF: The Other Side of Realism*, Thomas Clareson, editor, Bowling Green: Bowling Green University Popular Press, 1971, p. 22.

[8] *Ibid.*

[9] Thomas S. Kuhn, *The Structure of Scientific Revolutions,* Chicago: University of Chicago Press, 1970, p. 4.

[10] Lincoln Barnett, *The Universe and Dr. Einstein,* New York: Bantam Books, Inc., 1973, p. 113.

ceases to be a meaningful concept. Barnett notes that

> In trying to distinguish appearance from reality and lay bare the fundamental structure of the universe, science has had to transcend the "rabble of the senses." But its highest edifices, Einstein has pointed out, have been "purchased at the price of emptiness of content" A theoretical concept is emptied of content to the very degree that it is divorced from sensory experience. For the only world man can truly know is the world created for him by the senses. (pp. 113-14)

Barnett argues that "in the abstract lexicon of quantum physics there is no such word as 'really' " (p. 32). Further, he suggests that "The certainty that science can explain *how* things happen began to dim about twenty years ago. And right now it is a question whether scientific man is in touch with 'reality' at all—or can ever hope to be" (p. 16). According to Barnett, the theory of relativity does not "contradict classical physics. It simply regards the old concepts as limiting cases that apply solely to the familiar experiences of man" (p. 58). Consequently, as he suggests, "Einstein thus surmounts the barrier reared by man's impulse to define reality solely as he perceives it through the screen of his senses" (p. 58). He further comments that

> —the world of light and color, of blue skies and green leaves, of sighing wind . . . the world designed by the physiology of human sense organs—is the world in which finite man is incarcerated by his essential nature. And what the scientist and the philosopher call the world of reality—the colorless, soundless, impalpable cosmos which lies like an iceberg beneath the plane of man's perceptions—is a skeleton structure of symbols.
>
> And the symbols change. (p. 114)

In *The Einstein Intersection,* for instance, Lobey's perception of his world is essentially stable and coherent. What he perceives is limited to the world presented by his senses. His familiar experiences may be unusual and odd for us, but in his world they are normal. In other words, Lobey is unaware of what the philosopher would call the world of reality. What he perceives as normal—he describes himself as "Ugly and grinning most of the time" and as having "a figure like a bowling pin, thighs, calves, and feet of a man (gorilla?) twice my size (which is about five-nine) and hips to match"—is clearly unusual for us (pp. 5-6). Though Lobey's perception of his world is "innocent," our perception of his universe differs markedly from his. By the end of the novel, however, everything has become different; that is, Lobey no longer perceives a fixed and stable universe. He has come to understand what Doric tells him early in section four that "this is the real world you're living in. It's come from something; it's going to something; it's changing" (p. 53). He understands not only

the nature of change but the role it plays in his world and in his perception of that world, so much so that the only thing that is predictable is change itself. The novel grows out of the narrator's way of seeing his world come into conflict with his actual experience of it. The central conflict or paradox thus created grows out of the fact that what a man may "truly know" is limited by his senses to his familiar experiences, while, at the same time, his science informs him that his senses are but imperfect instruments that lack the power and refinement to perceive the immeasurable small but significant events in the physical world that exist outside the range of his senses. While science, as Barnett points out, tells us "nothing of the true 'nature' of things, it nevertheless succeeds in defining their relationships and depicting the events in which they are involved. 'The event,' Alfred North Whitehead declared, 'is the unit of things real' " (p. 110). Science may tell us "nothing of the true 'nature' of things," but its "skeleton structure of symbols," does influence and produce a change in the way in which man sees the world.

Kuhn notes in Chapter X ("Revolutions as Changes of World View") that "The assimilation of a previously anomalous visual field has reacted upon and changed the field itself" (p. 112). If we substitute the term "visual-conceptual" for the purely "visual" in Kuhn's sentence, then we come close to describing the relation that exists between mathematical physics and fiction in the novel and its relationship to that of the narrator's way of seeing in his world. Because, in a sense, the literary significance of the theory of relativity is that it allows man, in the final analysis, to see himself, as Barnett states, "merely [as] an ephemeral conformation of the primordial space-time field. Man stands 'midway between macrocosm and microcosm' " and "finds barriers on every side and can perhaps but marvel, as St. Paul did nineteen hundred years ago, that 'the world was created by the word of God so that what is seen was made out of things which did not appear' " (p. 118). The theory of relativity points toward another significant development in modern physics.

J. Bronowski in *The Common Sense of Science* points out that Werner Heisenberg's *Gedankenexperiments* (the term means literally "thought experiments") showed "that every description of nature contains some essential and irremovable uncertainty. For example, the more accurately we try to measure the position of a fundamental particle, of an electron say, the less certain will we be of its speed. The more accurately we try to estimate its speed, the more uncertain will we be of its precise position."[11] Further, as Barnett notes, "in the

[11] J. Bronowski, *The Common Sense of Science,* New York: Random House, Inc., p. 69.

very act of observing its position [the electron's], its velocity is changed; and, conversely, the more accurately its velocity is determined, the more indefinite its position becomes" (p. 34). The significance of Heisenberg's Principle of Uncertainty was not missed by philosophers or artists. Plato had argued that "The prison house is the world of sight," and, as Barnett and other have pointed out, "Every seeming avenue of escape from this prison house that science has surveyed leads only deeper into a misty realm of symbolism and abstraction" (p. 116). Barnett further argues that "It may be that the extreme and insurmountable limit of scientific knowledge will be reached in the attainment of perfect isomorphic representation—that is, in a final flawless concurrence of theory and natural process, so complete that every observed phenomena is accounted for and nothing is left out of the picture" (p. 116). The same speculation may be made for the limits of literary art and theory where the literary artist continually strives to create a perfect and final flawless account of human nature. This, of course, he must accomplish within the limitations imposed upon him by his senses while at the same time he takes into account new understandings of the universe revealed to him by his science. As Robbe-Grillet puts it, "Obviously I am concerned, in any case, only with the world as *my point of view* orients it; I shall never know any other. The relative sense of sight serves me precisely to define *my situation in the world.* I simply keep myself from helping to make this situation a servitude."[12] In a sense, this is exactly the narrator's position in *The Einstein Intersection.* The point to be made here is that reality conceived of as an "absolute" ceases to be a meaningful concept in modern science. Dyck declares

> More accurately; there is no *one* definable truth or reality. And since there is more than one conception of truth and reality, to any *one* observer all but his own conception of truth and reality must be fictitious. And since we cannot be so subjective as to accept the truth and reality of any one individual, or one group, or one society, or one branch of knowledge, or one age as truth and reality binding on all and always binding (though we do not deny any individual, or group, or age the bliss of pursuing his or its own fictions) we are forced to conclude that all concepts of truth and reality are fictitious. (p. 174)

The conclusion Dyck reaches seems valid enough and, in a limited sense, *The Einstein Intersection* represents the attempt of one individual (Lo Lobey) to pursue his own fictions only to discover in the search (quest) that his concepts of truth and reality, of the nature of his world, are fictitious. Delany quotes Jean-Paul Sarte at the begin-

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[12] Robbe-Grillet, p. 74.

ning of the fifth section of the novel to the effect that "Experience reveals to him in every object, in every event, the presence of something else" (p. 55). Earlier in the novel Doric, the "kage-keeper," tells Lobey "this is the real world you're living in. It's come from something; it's going to something; it's changing. But it's got right and wrong, a way to behave and a way not to. You never wanted to accept that, even when you were a kid, but until you do, you won't be happy" (p. 53). Lobey's unwillingness to accept the nature of his world is in part a failure of his willingness to *see* his world. He staggers through this "abstracted novel," pursuing, like the author Delany, his own fictions (p. 118). Delany tells us at the beginning of section two that "It turned windy as we floated beneath the black wood arch of the Ponti Academia; I was trying to assimilate the flowers, the vicious animals, with Lobey's adventure—each applies, but as yet I don't quite know how" (p. 13). The information Delany's journal supplies suggests that he wishes to make a close analogy between the writer's pursuit of his own fictions and those fictions pursued by his major character.

Someone may object, however, to what has been suggested about the nature of physics and argue that "physics should be described as physical reality, or a set of theories of physical reality, or of the physical universe" and, therefore, should not be compared with literary works of art (Dyck, p. 174). The apparent reason for this objection is that literary art is a product of the mind and is concerned with human experience whereas physics is concerned with the physical world only. The resulting argument holds that physics and literary art are incommensurate since they deal with radically divergent phenomena. Obviously nothing could be further from the truth, as I have already partly shown. As Dyck points out, if physics should be considered in terms of one of these propositions, or all, then, each "of these propositions holds true. And each is circular. And each is incomplete" (p. 174). In what ways are these "propositions" circular and incomplete? What is missing? I have already suggested that contemporary physics no longer deals with reality but with realities and that an event cannot be separated from a fact and an observation, that the two are mutually related and tied together in an observation and that the very act of observation itself produces or causes to bring about a change in the thing observed. Dyck suggests

> Each leaves out myriads of qualities and iridescences that impinge, physically, on the human senses and the imagination. If a physicist should object by saying that what his systems and theories leave out is due to his science not having caught up with all phenomena he would confirm hitherto established physics as fictitious because new insights will lead to modified fiction and a clearer realization of the fictitiousness of current physics. If he should object by surmising

> that man will *never* entirely grasp nature's mysteries he would in so surmising proclaim that man's physics must always remain fiction. And his hunches about the unexplored might be classified as unpublished fiction—unless, of course, he is a cosmologist. But to be a cosmologist is to be a poet. Man cannot exist in the void. He needs a solid footing in the universe. And what could be more solid than fiction? (p. 174)

If physics is a type of fiction and *The Einstein Intersection* is an imaginative invention, a fiction, then at what point or points do the fictions of mathematical physics and fiction intersect in the novel? In one sense this seems to be the central concern and question of Delany's novel; isn't it implicit in the title itself? After all *The Einstein Intersection* suggests that something intersects with something else and that the novel is a representation of that intersection. In other words, the title of the novel "names" or delineates something that takes place in the novel—an event, an occurrence—between the creative act and the imagination and the way in which the narrator perceives his world. For the world created in the novel, and presented by the novel, is going to rest in the final analysis on the particular understanding the narrator holds of the nature of his experience and the physical world. This in turn will be dependent upon how the narrator reveals his world, that is, the narrative strategy and technique of the novel. The answer to the question, "At what point do the fictions of mathematical physics and fiction intersect?" resides in the form of the novel. For form in the sense I am using that term here, becomes a synonym for model. Yet a model is a system which not only defines itself but something else, and that something else is nothing less than the novel.

So far I have discussed the relationship that exists between mathematical physics and fiction and suggested their similarities. However, it is clear that fiction, that is, the novel, may in its own right present a picture of its world and, therefore, present indirectly a physics. The concepts Lobey holds shape the way in which he sees his world while his experience of that world forces him to reshape his fundamental ideas about its nature. In other words, the novel considered as a fictional system, or model, will force us to examine the narrator's own particular conceptions and realizations (creative or otherwise) of *his* world. Yet the way in which the narrator sees his world will take shape and form out of the intersection of physics with fiction in his own mind. This, after its own fashion, presents certain problems. Witold Gombrowicz suggests, "Man is made in such a way that he continually has to define himself and continually escape his own definitions. Reality is not about to let itself be completely enclosed in form. Form for its part does not agree with the essence of life. Yet all thought that tries to define the inadequacy of form be-

comes form in its own turn and thus only confirms our tendency towards form."[13]

Delany tells us that "The central subject of the book is myth" (p. 78). But the novel is not concerned with specific myths per se, such as Orpheus, or as Stephen Scobie speculates, with Norse mythology. Rather, the novel is concerned with "why we have them," as Delany informs us, that is, myths, and "what we use them for" (p. 126). *The Einstein Intersection* is set in the distant future, long after the holocaust of nuclear war (post-deluge or after the flood is its archetypal counterpart) has destroyed most of the planet. Lobey, the narrator of the story, is in love with a girl named Friza. They are not human. They have inherited man's "bodies, their souls—both husks abandoned here for any wanderer's taking," as Spider informs us (p. 129). Friza is killed by Kid Death (symbolized in the novel by Billy the Kid). Lobey (Orpheus?) must set out on a quest to find Friza and regain her. Early in the novel Lobey falls into the ruins of an abandoned maze of underground shelters. He faces and kills a futuristic minotaur. He confronts a machine and as he tells us "It was a computer from the old time (when you owned this Earth, you wraiths and memories), a few of which chuckled and chattered throughout the source-cave. I'd had them described to me, but this was the first I'd seen" (p. 34). The computer's name is "PHAEDRA." In the conversation that takes place between Lobey and Phaedra we learn from Phaedra that she was placed in the underground complex "by people who never dreamed that you would come. Psychic Harmony Entanglements and Deranged Response Association, that was my department. And you've come down here hunting through my memories for your lost girl" (p. 38). Lobey's quest for Friza, however, is difficult. He must somehow find his way out of the maze—the objective correlative to mankind's "million year old fantasies" (p. 39). Phaedra tells Lobey "You're basically not equipped for it. . .But I suppose you have to exhaust the old mazes before you can move into the new ones. It's hard" (p. 39). Lobey sometime later, after finding his way out of the maze, joins a dragon drive (cattle drive?) on its way to Branning-at-sea (Dodge City?). He meets Spider and Green-eye. They arrive at Branning-at-sea where, with Spider's help, Billy the Kid is killed, Green-eye (Christ?) is crucified and hung from a tree, and Lobey meets the Dove. Near the end of the novel Spider explains to Lobey "As we are able to retain more and more of our past, it takes us longer and longer to become old; Lobey, everything changes. The Labyrinth

[13] Witold Gombrowicz, quoted in "Introduction", by Jacques Ehrmann, *Structuralism*, Jacques Ehrmann, New York: Doubleday & Company, Inc., 1970, p. vii.

today does not follow the same path it did at Knossos fifty thousand years ago. You may be Orpheus; you may be someone else, who dares death and succeeds. Green-eye may go to the tree this evening, hang there, rot, and never come down. The world is not the same. That's what I've been trying to tell you. It's different" (p. 131). Delany has informed us earlier in the novel that "Endings to be useful must be inconclusive" (p. 137). Lobey's search for Friza becomes a quest for his own identity. He must leave the earth and go, like man, to the stars. Lobey explains "In my village there was a man who grew dissatisfied. So he left this world, worked for a while on the moon, on the outer planets, then on worlds that were stars away. I might go there" (p. 155). Spider, in reply to Lobey's statement, declares "I did that once. It was all waiting for me when I got back" (p. 155). Lobey, however, wishes to know "What's it going to be like?" and Spider suggests "It's not going to be what you expect" (p. 155). Lobey hesitantly questions "It's going to be . . . different?" (p. 155). And, of course, the answer to this question is the conclusion of the novel—and that conclusion in inconclusive. The novel ends with Lobey telling us "As morning branded the sea, darkness fell away at the far side of the beach. I turned to follow it" (p. 155). In a sense Lobey's journey has already been taken since he has told us his story, that is, conceptually, the end of the novel is its beginning and vice versa.

It was suggested earlier that something intersects with something else in the novel and that this intersection becomes the novel, that is, *The Einstein Intersection.* The Einsteinian world of relativity *intersects* with the Goedelian to reveal, at that point of intersection, the limitations and possibilities of human activity. Intersection, as used here, is used in its mathematical sense—as a conjunction of two or more sets of objects whose elements are mutually shared by both in the same area. In the novel there exists a set of ideas which are given expression by Spider to Lobey about the nature of his world. These ideas are taken from mathmematical physics. In addition to these ideas there exists a set of ideas which are concerned with the nature of the creative act, the creative process, and the life of the imagination. These ideas, that is, the ideas concerned with the nature of creativity, are often expressed by Delany in quotations from his journal which are prefixed to the beginning of various sections of the novel. However, these ideas, like the ones from mathematical physics,, are also expressed by various characters in the novel and are reflected in the form and structure of the novel. It is out of the intersection of these two sets of ideas that the form of the novel grows. Further, the intersection of these two basic sets of ideas defines the starting and stopping points of the novel.

Few readers will be without some knowledge of Einstein and the theory of relativity, part of which I have already explored in terms of

physics, while other readers will know little about Kurt Goedel. Howard DeLong in discussing the implications of Goedel's proof in "Unsolved Problems in Arithmetic" explains that

> The central change that the limitative theorems [of Goedel] required of all previous theories of the nature of mathematics was the recognition that there are unanswerable questions in the subject. Earlier it had been thought that if a question could be made precise, that question had an answer. Now it was seen that perhaps some precise questions do not have precise answers. By way of analogy, think of an object, say a light bulb. If you then ask, "Is it made partly of cork?" the answer will probably be no. If, however, you ask, "Does it weigh exactly 3.1 ounces?" the question is probably unanswerable. The reality toward which the question is directed is indeterminate in some ways. Such indeterminateness is characteristic of products of the imagination, including artistic creations. ("How often did Juliet sneeze during the year before she met Romeo?") In these areas it is pointless to ask questions about things that are not determined by evidence.
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> Compared with imaginative creations, physical reality is determinate, and yet, the results of quantum theory suggest that physical reality is also indeterminate in certain ways.[14]

Here we have a type of indirect statement about the indeterminate nature of imaginative creations. What is clear, or should be clear, is that there are essentially a set of unanswerable questions about the subject of literary art. For instance, there exists a set of precise questions I may ask about *The Einstein Intersection* which are unanswerable. I might ask "How old is Lobey?" and there is nothing in the novel which will allow me to answer this question precisely. Lobey's age is not given. All I may answer is that Lobey seems, from the various descriptions he gives of himself, to be relatively young. What the limitation theorems "represent," then, "is the discovery of an abstract structure for which it is impossible for any human being to make systematically complete and correct assumptions about" (DeLong, p. 59). It may also be pointed out that "Our powers of conceptual discrimination have limits just as our powers of perceptual discrimination do" (DeLong, p. 59).

Goedel's incompleteness theorem "states (roughly) that for any known formal systems for arithmetic there are formal sentences analogous to P, that is, either the system is incorrect (proves falsehoods) or it is incomplete (contains truths not provable in the system). 'P' stands for the sentence 'This sentence is not provable'" (DeLong, p. 56). As DeLong explains

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[14] Howard DeLong, "Unsolved Problems in Arithmetic", *Scientific American*, CCXXIV, (Mar., 1971), pp. 58-59.

> The existence of P does not make the system inconsistent, but it does produce something disconcerting: P is true if and only if P is not provable. Hence we conclude that if we have P, then the cozy relation between truth and provability that one attempts to achieve in a formal system, namely that the set of sentences true under any intepretation that makes the axioms true be identical with the set of provable sentences, is destroyed. The liar has disappeared but his grin, like the Cheshire cat's, remains behind. (p. (p. 56)

DeLong is referring to the "liar paradox" formulated by the ancient Greeks which can be stated, as he suggests, as "the problem of deciding whether or not the following sentence is true: 'This sentence is not true'" (p. 56). For obvious reasons it is all but impossible to outline but briefly here the general idea of Goedel's proof, and, as DeLong points out, all we can hope to convey is the "spirit of the proof" (p. 56). Philosophically, what is significant for the student of literature is that Goedel's proof suggests that there may be (from a mathematician's point of view, indeed, are) limitations to man's abilities. This may be stated another way by suggesting that any critical reading of a literary work of art which presupposes to examine a novel, for instance, only in terms of what is contained in the novel, will fail. In other words, in theory the assumption that critical presuppositions about the nature of literary art may be proved by relying completely upon internal evidence is impossible without stepping outside that system (the literary work of art). Further, it may be argued that the novel must be open-ended and contain assertions, ideas and concepts which will not be provable by relying on that which is given in the novel itself. In summary, where Goedel's proof establishes, for the mathematician, the idea that there *are* limitations to man's abilities, so too, in the novel, Spider's explanation of the nature of the world to Lobey establishes the limitations of his world and his position in it.

Delany begins section eleven of *The Einstein Intersection* with three quotations, one from *The Revelation of John,* an except from a letter from James Agee to Father Flye, and a short passage from Plotinus' *Enneads.* Each of these quotations, in its own way, points toward the significance of this section as the center of the novel—artistically, philosophically, and conceptually.

> But I have *this* against thee, that thou didst leave thy first love.
>
> The Revelation of John/*Chapter 2, verse 4*
>
> My trouble is, such a subject cannot be seriously looked at without intensifying itself toward a center which is beyond what I, or anyone else, is capable of writing of. . .Trying to write it in terms of moral problems alone is more than I can possibly do. My main hope is to state the central subject and my ignorance from the start.
>
> James Agee/*Letter to Father Flye*
>
> Where is this country? How does one get there? If one is a born lover

with an innate philosophic bent, one will get there.
Plotinus/*The Intelligence, the Idea and Being* (p. 125)

After wandering about Branning-at-sea for sometime Lobey finds himself at Spider's house. Ostensibly, Lobey has gone to Spider's home to collect his pay. Spider asks Lobey to sit down "I want to talk to you" (p. 125). Lobey answers "About what? I asked. Our voices echoed. The music was nearly silent. 'I have to be on my way to get Friza, to find Kid Death' " (p. 126). Spider tells Lobey "That's why I suggest you sit down . . . What do you know about mythology, Lobey?" (p. 126). Lobey recounts briefly his meager knowledge of mythology fo Spider and Spider once again questions "Again, what do you know about mythology?—I'm not asking you what myths we have, nor even where they come from, but why we have them, what we use them for" (p. 126). Lobey initially believes that the function of mythology is to guide him in his search for Friza. He tells us "I could offer nothing else" (p. 126). Spider then raises the central question which leads to the center of this section and the novel "Do you understand difference, Lobey" (p. 127). Lobey replies "I live in a different world, where many have it [difference] and many do not. I just discovered it myself weeks ago. I know the world moves toward it with every pulse of the great rock and the great roll. But I don't understand it" (p. 127). We are briefly told that all we can ever hope to know of difference "is what it is not" (p. 127). Spider, in answer to Lobey's "What isn't it?" replies in a rather lengthy explanation that

> It isn't telepathy; it's not telekinesis—though both are chance phenomena that increase as difference increases. Lobey, Earth, the world, fifth planet from the sun—the species that stands on two legs and roams this thin wet crust: it's changing, Lobey. It's not the same. Some people walk under the sun and accept that change, others close their eyes, clap their hands to their ears and deny the world with their tongues. Most snicker, giggle, jeer and point when they think no one else is looking—that is how the humans acted throughout their history. We have taken over their abandoned world, and something new is happening to the fragments, something we can't define with mankind's leftover vocabulary. You must take its importance exactly as that: it is wonderful, fearful, deep, ineffable to your explanations, opaque to your efforts to see through it; yet it demands you take journeys, defines your stopping and starting points, can propel you with love and hate, even to seek death for Kid Death—" (p. 127)

Lobey finishes Spider's explanation with "—or make me make music. . ." even though he is unaware of the significance of what he has just suggested by his own conclusion (p. 127). Clearly, Lobey has not yet fully understood Spider. He questions "What are you talking about Spider?" and Spider replies

> If I could tell you, or you could understand from my inferences, Lobey, it would lose all value. Wars and chaoses and paradoxes ago, two mathematicians between them ended an age and began another for our hosts, our ghosts called Man. One was Einstein, who with his Theory of Relativity defined the limits of man's perception by expressing mathematically just how far the condition of the observer influences the thing he perceives. (p. 127-28)

What Spider is trying to explain to Lobey is that man is a prisoner trapped by his senses in a world which he can only imperfectly understand. Yet the attempt must be made to come to an understanding of the essential nature of the world and man's position in it. As Spider has already explained, "it demands you take journeys," for it is only through defining "your stopping and starting points" that you may bectme aware of your own identity and your place in the world (p. 127). Once the nature of the world is dis change. We have already discussed at some length the significance of relativity and the limitations it imposes on the observer and the influence the observer may have on the thing he perceives. What is more important, however, is that the explanation Spider gives Lobey forms the nexus or analogical center and counterpart conceptually to the novel itself. Another way of stating this is to suggest that the novel is a fictional system which contains within itself its own explanation, this explanation containing, in a sense, the conceptual model of the novel. It clearly suggests what the function of the creative act is in Lobey's world. Spider points out that the other mathematician

> . . . was Goedel, a contemporary of Einstein, who was the first to bring back a mathematically precise statement about the vaster realm beyond the limits Einstein defined: *In any closed mathematical system*—you may read 'perceivable, measurable phenomena'—*which though contained in the original system, can not be deduced from it*—read 'proven with ordinary or extraordinary logic.' Which is to say, there are more things in heaven and Earth than are dreamed of in your philosophy, Horatio. There are an infinite number of true things in the world with no way of ascertaining their truth. Einstein defined the extent of the rational. Goedel stuck a pin into the irrational and fixed it to the wall of the universe so that it held still long enough for people to know it was there. And the world and humanity began to change. And from the other side of the universe, we were drawn slowly here. The visible effects of Einstein's theory leaped up on a convex curve, its production huge in the first century after its discovery, then leveling off. The production of Goedel's law crept up on a concave curve, microscopic at first, then leaping to equal the Einsteinian curve, cross it, outstrip it. At the point of intersection, humanity was able to reach the limits of the known universe. . . .(pp. 128-29)

It should be clear that the title of the novel is taken from this explanation. Spider's comments about the meaning and significance

of Einstein and Goedel form the literary and philosophical center for what occurs in *The Einstein Intersection*. What we are to understand is that, as Spider tells Lobey, "There's just as much suspense today as there was when the first singer woke from his song to discover the worth of the concomitant sacrifice. You don't know Lobey. This all may be a false note, at best a passing dissonance in the harmonies of the great rock and the great roll" (p. 131). Spider is telling us, albeit indirectly, that the creative act today still has all the meaning and significance that it has always had. We are told that "Things passing in a world of difference have their surrealistic corollaries in the present. Green-eye creates, but what he creates is an oblique side effect of something else. You receive and conceive music; again only an oblique characteristic of who you are—" (p. 133). But though Lobey has understood much, he still fails to perceive the nature of his identity. He is, of course, a musician. This is clear from the first paragraph of the novel. Yet Lobey himself is unaware of what being a musician entails, that is, that he must continually commit himself to the creative act and all that that suggests. After all, Lobey has been told by Spider that "there are more things in heaven and Earth than are dreamed of in your philosophy, Horatio" (p. 128). It remains for Lobey to discover his nature and realize the full implications of what it means to be a creative artist. Once Lobey discovers himself he will become a writer since he is a narrator agent who produces a noticeable effect on what he elects to present as his story.

The novel, then, grows out of two great systems of thought and justifies the idea that form is, after all, only an extension of content and nothing more. Yet it is equally clear that the theory Spider presents creates an implicit world view or, as I have preferred to call it, a physics. It is a physics because it explains the phenomena of Lobey's world and the way in which those phenomena take their shape and find their significance in relation to the narrator's own perceptual awareness of his world—its limitations and possibilities. It is also equally clear that whatever occurs in the novel is meant to be understood by making a comparison between the intersection of Einsteinian thought with that of Goedelian. Two great systems of thought intersect in the novel. The Goedelian triumphs since it reinforces the novel's literary dimensions. It does so because it admits the limitations of science while at the same time it gives "absolute" justification to man's art, his creativity. The concepts of mathematics and physics form the inner model to the novel as a fictional system. This system in turn forces us to realize that what a man can "truly know" is, in the final analysis, limited to the "prison house of his senses" to the familiar experiences of his world. Where physics and mathematics may suggest that there are limitations to man's abilities, they too, like fiction, release him into the far vaster realm

of the imagination whose boundaries are determined and limited only by the creative act, by the power of the imagination. As Wallace Stevens has said, "We live in the mind."[15] Yet if we live in the mind, the things of the mind present themselves to us through structured systems, in this case, language, and the various forms which language may take are, in their own turn, the result of the imagination insofar as the imagination presents the possibilities of things.

What I want to suggest is that Delany's novel represents a shift in the art of the science-fiction novel and that this shift is understandable only in terms of the various premises that give rise to it. This shift in the art of the science-fiction novel is, to borrow an analogy from Judith Merril, "as though a figurative planet composed of man's intellect, suddenly acquired so much additional mass, or velocity (or both?) that it flew out of orbit, breaking up and fragmenting under the strain,"[16] In other words, this shift in the art of the science-fiction novel is a result of a different way of looking at man and the world. The various premises which constitute this new way of looking at man and the world are of such a different order that they may be compared to the breaking up of a figurative planet and its assumption of a new orbit about the sun.

Ostensibly, the various themes of *The Einstein Intersection* are worked out in terms of myth, as I have already suggested. Delany informs us that "The central subject of the book is myth" (p. 78). Stephen Scobie in "Different Mazes: Mythology in Samuel R. Delany's 'The Einstein Intersection' " suggests that " 'Myth,' however, is not a simple or a unified concept."[17] Scobie identifies or discovers "(at least) three distinct *levels* of myth" in the novel (pp. 12-13). First, there is what he terms " 'fictional myth,' mainly Greek, the central references being to Orpheus, Theseus and the maze, and Pan. This is a mythology to which we do not give any *literal* belief, though we do admit that it carries a kind of 'truth,' in anthropological, social, or psychological terms" (p. 12). Second, Scobie notes that there is a " 'religious myth.' This is a mythology that is still alive as a religious faith: while few people today believe in Apollo, a great many do believe in Jesus Christ" (p. 12). And finally, there is " 'historical myth,' the main references being Billy the Kid, Jean Harlow, and

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[15] Wallace Stevens, "Imagination as Value", in *The Necessary Angel,* New York: Vintage-Snopf, 1951, p. 140.

[16] Judith Merril, "What Do You Mean: Science? Fiction?", in *SF: The Other Side of Realism,* Thomas D. Clareson, editor, Bowling Green: Bowling Green University Popular Press, 1971, p. 56.

[17] Stephen Scobie, "Different Mazes: Mythology in Samuel R. Delany's "The Einstein Intersection", *Riverside Quarterly,* V, No. 1 (1973), p. 12.

Ringo Starr" (p. 13). Further, Scobie suggests that "Beyond these three levels of mythology, and such minor references to comic-book and movie serial mythology as Spiderman' and the 'cliffhanger' scene, there is one basic over-riding level. The characters of the book are not human; they are another race who have assumed the patterns of the human body and soul, and—as one of my [Scobie's] students most concisely put it—they have made myths out of *us*" (p. 13). Scobie is correct when he cites his student's remark that the characters of the novel "have made myths out of us." All of the character's names in the novel are suggestive of various fictional, historical, and religious figures. For instance, Lobey becomes Orpheus while at the same time his name suggests indirectly, perhaps, Lobo (wolf), though admittedly this connection is rather tenuous and is made only to suggest a certain character trait of Lobey's personality; that is, he is an individual alone in his world. Lobey's name, in the novel, is also linked to Ringo Starr and Billy the Kid. The Dove is, in the novel, linked to Helen of Troy and Jean Harlow. Green-eye becomes Christ or any great martyr and Spider "every traitor you've [Lobey] imagined" (Delany, p. 130). The purpose, of course, of using names as Delany has done in *The Einstein Intersection* is to deepen our sense of historical continuity in order to allow us to move into the future and see Lobey as a heroic figure. In a sense Lobey is a composite figure who exhibits the traits of great figures of the past while at the same time emerging as a unique figure. Although Scobie has understood much about *The Einstein Intersection,* in an important sense, however, he has missed the point of the novel, for he fails to perceive another and more significant level to myth in the novel. If *The Einstein Intersection* treats the interface between Lobey and his memories (racial or whatever) and if it treats the interface between Lobey and his world, then it also treats the "human" problems which arise out of Lobey's relation to the phenomena and science of his world. What I am suggesting is that Scobie has overlooked two fundamental levels of myth in *The Einstein Intersection.* First, and most importantly, science itself becomes a myth in the novel. After all, Lobey has inherited man's science, or at least it would seem a safe assumption that he has inherited his science, since he tells us about it in his story. The actual science available to Lobey, however, may be less than that which was known to man, though the novel in several places suggests that the products of man's science—his "ships and projection forces"—"are still available to anyone who wants to use them" (Delany, p. 129). The presence of science in Lobey's world is comparable to what Scobie suggests about the function of fictional myth, that is, Lobey does not give any *literal* belief to what Spider tells him of the theories of Einstein and Goedel. Spider himself suggests "I want a Goedelian, not an Einsteinian answer. I don't want

to know what's inside the myths, nor how they clang and set one another ringing, their glittering focuses, their limits and genesis. I want their shape, their texture, how they feel when you brush by them on a dark road, when you see them receding into the fog, their weight as they leap your shoulder from behind; I want to know how you take to the idea of carrying three when you already bear two. Who are you, Lobey?" (Delany, p. 130). Spider's interest in science is not functional; that is, he is not interested in putting science to work for him to achieve some type of control over the physical world, but rather he is interested in the shape and texture of science as an explanation for the existence of certain phenomena. Further, Spider's explanation of the meaning of Einstein and Goedel, though accurate, gives only the shape and texture to Einstein and Goedel's theories. I might also point out that Lobey's science *is* inherited in the same way in which the Greek myths of Orpheus, Theseus, and Pan and the myths of Billy the Kid, Ringo Starr, and Jean Harlow have been inherited. However, there is one important difference between science as a myth and the myths of the Greek Orpheus and the twentieth-century Billy the Kid. That difference is simply that Lobey's race is on the verge of re-discovering the power of science. In other words, science may exist as a myth in Lobey's world, but at the same time it holds possibilities inherent in that future. Science, or rather the explanation of scientific thought which Spider presents to Lobey, forms the philosophical and conceptual center of the novel and suggests the possible solution to Lobey's understanding of the nature of the world and, since, as we have already seen, *The Einstein Intersection* is concerned with the subject of myth, then science itself becomes a myth and serves a mythic function in the novel. *The Einstein Intersection* reconciles art with science (mathematical physics) and demonstrates that they are not incompatible interests or incommensurate ways of seeing the world. The reason for this reconciliation, once grasped, is quite simple. DeLong suggests "Just as indeterminateness, previously considered peculiar to imaginative creations, was found in the physical world with the discovery of the quantum theory, so indeterminateness was also found in mathematics with the discovery of the limitative theorems" (p. 59). The reconciliation between art and science which takes place in *The Einstein Intersection* is made possible by this understanding. This is clearly the case since the Einsteinian world of relativity places a premium on perceptual relativity while the world as Goedel conceived it emphasizes the indeterminate and irrational—both points of view which would have been impossible in classical physics. In a sense man's science has caught up with man's art. Nevertheless, the fact remains that the concepts of mathematical physics which stand at the center of the novel *explain* the nature of Lobey's world of physical (genetic

and material) and psychic abnormality. The reconciliation which takes place in the novel between art and science and between classical and contemporary physics, of course, occurs ultimately in the creative act, in the imagination, and it does so since Lobey's story is an imaginative presentation of the possibilities of things. In other words, Lobey selects and "edits" his presentation from that which is implicit in his act of telling his own story. Lobey's act of telling his own story is implicit in the structure of the novel and its narrative technique and is one of the philosophical and creative consequences of the fact that what has been presented only points to what is implicit in what *was* presented.

The second level of myth in *The Einstein Intersection* which Scobie fails to identify is concerned with the nature of creation and the creative act. In *The Einstein Intersection* the creative act is given the status of a myth. Everything in the novel points toward this central fact—that the novel is a product of the imagination which presents, after its own fashion, a study of the creative process as it works itself out in Lobey's mind. The emphasis throughout the novel is on the *act* of doing or making something—music, and consequently, the novel. What Scobie fails to understand, then, are the implications of what is inherent in the conclusion he draws about the function of myth in *The Einstein Intersection.*

> The ending of *The Einstein Intersection* leaves everything still open to question. The individual response still has to be made: by Lobey, and by the reader. Mythology also is inconclusive: the pattern of the maze exists, but you must still create your own as you walk through it. Myths are not images, not answers. (p. 18)

Myths may not be "images" or "answers" but they do, as Goeffrey Hartman points out, "allow man to keep on functioning."[18] What Delany is saying, and has said several different times in *The Einstein Intersection,* is that the traditional myths (Greek or whatever) no longer serve the same function they once did. Myths live and die like fashions in the garment industry, though admittedly their life is longer. The creation of a personal mythology (Blake is a good example) is a response of the individual to the death of a more general pervasive mythology. This is why, in part, Spider wants "a Goedelian" and "not an Einsteinian answer" to his questions about mythology. This is why Lobey "may be Orpheus" or he "may be someone else" (Delany, p. 131). The reason, as Spider informs us, is that "the world is not the same. That's what I've been trying to tell you

[18] Goeffrey Hartman, "Structuralism: The Anglo-American Adventure", in *Structuralism,* Jacques Ehrmann, editor, New York: Doubleday & Company, Inc., 1970, p. 152.

[Lobey]. It's different" (Delany, p. 131). Myths are models.[19] They establish a context which allows the individual a way of explaining the essentially mysterious and unfathomable nature of the world and life. They are pre-scientific explanations, if not pre-rational, and, as such, they "are productive of social cohesion."[20] Delany's response to the problem of mythology is to attempt to create a new mythology, one which emphasizes the creative nature of man and life and is not backward looking. This is why he leads us in *The Einstein Intersection* through the traditional myths of western society, from the past to the present. Billy the Kid, Jean Harlow, and the Beatles become, in *The Einstein Intersection,* the mythology of the twentieth century upon which Lobey builds his own *responses* to the indeterminateness of his world. If Lobey and his race "have made myths out of us," then we must conclude that the traditional myths (Greek, etc.) are wanting in some vital way. What they lack is, of course, functionality. Delany tells us, in an excerpt from his journal at the beginning to section twelve, that "Lobey starts the last leg of his journey. I cannot follow him there" (p. 136). The reason why Delany cannot follow Lobey in his journey is clear—the traditional myths (of Orpheus, Theseus and Pan, Ringo and Billy the Kid) are outworn and no longer serve their purpose. They are the responses of a *different* world to its own problems. What Scobie fails to understand is that artistically it is necessary first to present the old backward looking myths in order to allow us to move through them and into a new response to the world. The creative act demands a new response, a new exploration. Delany may not be able to follow Lobey, since Lobey has fictional existence in his own right, but Delany, in his own way, does create his own response to the problem, and that response is *The Einstein Intersection.* Further, through the use of the quotations from the author's journal which are prefixed to the beginning of each section Delany allows us to trace his own journey, its starting and stopping points.

The "historical" and "religious" myths of the novel, the ones Scobie identifies, are thematic and structural devices which are necessary in order to allow us to create a new and more powerful mythology, and that mythology is nothing less than science. Science, once seen and understood as this new mythology, is reflected in the very title of the novel. The intersection of the Einsteinian world of relativity with the Goedelian world of indeterminateness emphasizes the irrational and leads us only deeper "into a misty realm of symbolism and abstraction." Science cannot take us further than Goedel. Yet in

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[19] *Ibid.*, p. 143.
[20] *Ibid.*

that distance lies a remarkable achievement. For it suggests that a radical shift in the art of the science-fiction novel has taken place. It does so since the concepts of mathematical physics which Spider presents are used to "support" and justify the nature of the creative act. In other words, the metaphors (models) which form the framework and structure of the novel are scientific principles and concepts "with their ideal aim of corresponding to structures that 'really' exist in the universe forever unverifiable."[21] They are not drawn from nature but rather portray a relationship between various events and occurrences which take place in *The Einstein Intersection.* What I am suggesting is that our perception of a change in the art of the science-fiction novel and, specifically, in *The Einstein Intersection,* is dependent upon perceiving a shift in the way in which the narrator, in this case Lobey, sees his world. You cannot see or understand the novel through the lens of traditional criticism, for to do so is only to perceive, in the final analysis, the tradition.

The narrative strategy of the novel is dependent, then, upon Lobey's recognition that a shift has occurred in his visual-conceptual field. Lobey may be a futuristic Orpheus but, more importantly, he is a fictive "I" or eye, a consciousness made aware of the meaning of "difference" and its role in his world. Wayne C. Booth in *The Rhetoric of Fiction* points out that "as soon as we encounter an 'I,' " in fiction "we are conscious of an experiencing mind whose views of the experience will come between us and the event."[22] Lobey is a narrator-agent since he produces "a measurable effect on the direction of the events he selects to present as his story."[23] The fundamental problem of the novel demands a clear understanding of what is implicit in this type of narrative technique. That understanding involves the strategy which the narrator uses to tell his story. Obviously, Lobey is a musician. The novel begins significantly enough with a description of Lobey's flute-machete:

> There is a hollow, holey cylinder running from hilt to point in my machete. When I blow across the mouth-piece in the handle, I make music with my blade. When all the holes are covered, the sound is sad, as rough as rough can be and be called smooth. When all the holes are open, the sound pipes about, bringing to the eye flakes of sun on water, crushed metal. There are twenty holes. (p. 5)

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[21] Sallie Sears and Georgianna W. Lord, "Introduction", in *The Discontinuous Universe,* Sallie Sears and Georgianna W. Lord, editors, New York: Basic Books, Inc., 1972, p. v.

[22] Wayne C. Booth, *The Rhetoric of Fiction,* Chicago: The University of Chicago Press, 1967, pp. 151-152.

[23] *Ibid.,* pp. 153-154.

Lobey's flute-machete has significance in several important ways. First, Lobey focuses our attention on his instrument as a physical device which serves a creative function—to make music. The emphasis in the opening paragraph is on the creative act—to make something happen, occur—and the possibilities inherent in that act. Yet Lobey, himself, is unaware at this point of the full meaning and significance of this act. The flute-machete may serve as a device for creativity, but it may also serve as a device for destruction—the musician's axe. Since our attention is initially focused on the object used in the creative act, it is clear that the user is an artist. What is more important, however, is our realization that this opening paragraph establishes the narrative point of view of the novel and informs us that Lobey will tell his own story. Though our attention may be initially focused on the story of Lobey who, like Orpheus, sets out on a journey (quest) to regain his lost love, the fact that the story has already taken place forces us to conclude that the author of his story, Lobey, has already discovered certain things about the nature of himself, his world, and his relation to that world. In other words, there exist at least two stories in *The Einstein Intersection.* The first story, as told by Lobey, concerns an earlier history of himself as the artist (musician) who sets out on a journey to accomplish a specific end. As in all traditional quests, the protagonist will face certain hardships and trials. It is out of these "encounters" with the phenomena of his world that his experience will come into conflict with his understanding of that world. Likewise, the fact that Lobey is the narrator of his own story suggests that he has made certain discoveries about the nature of his world and his way of seeing in that world. These discoveries force Lobey to a new understanding of himself and his relation to his world. We never remember reality but only the memory of that reality, and our memory of that reality will, of necessity, be different from our actual experience of it. Lobey's problem, then, is an artistic one and demands that he make choices.

At the beginning of the sixth section of *The Einstein Intersection* Delany quotes John Ciardi's "How Does a Poem Mean" to the effect that "A Poem is a machine for making choices" (p. 65). The analogy Delany wishes us to make is clear. We should consider the novel a machine for making choices and the choices we make will be determined by our previous understanding of the creative process and its relation to the imagination. Though Delany's ploy is to call on authority, at this point in the development of the novel, to justify the idea of the possibilities inherent in the act of making a choice, it still remains for the novel to demonstrate Lobey engaged in the act of making choices. And, after all, the choices Lobey will make are conditioned on the supposition that he has a purpose—to find Friza. Though Lobey may choose one route over another, the choice he does

make will be directed toward what he understands as his goal. What he will discover, at some point in his journey, is that the basic nature of his goal has changed, and with his recognition of that change will come a different perception of himself and his world.

However, what is even more important than the fact that Lobey is a musician is the fact that he is an author. There is, then, the inner story of Lobey the musician who sets forth on a journey of discovery in his attempt to find Friza. In this respect the novel is quite traditional. Yet it is out of this quest that Lobey's confrontation with the phenomena of his world arises. The basic incongruities that arise out of this quest continually impinge upon his senses. Out of the familiar world the narrator has always known—the world of his senses—will grow the strange and unfamiliar, so that, in a sense, by the end of the novel, Lobey will have undergone a radical shift in his visual-conceptual field. He will see the world and himself with a difference. As Scobie notes, " 'Difference' and 'different' are the key words of the book; they recur on almost every page" (p. 14). Further Scobie correctly points out that not only is "the basic characteristic of their society [Lobey's]. . .change; its controlling myth is metamorphosis. Delany's major image for this is genetic mutation, but it is apparent also in the language and structure of the book" (p. 13). Consequently, the first paragraph of the novel serves several important functions. It establishes the narrative framework and point of view of the novel. Lobey is a reflective intellectual consciousness. It is interesting to note that the distance which separates Lobey as narrator from Lobey as musician is never great within the confines of the novel itself. He continually intrudes upon his story to remind us that he is telling it. The effect of this intrusion by Lobey into his narrative is to remind us that the story that is immediately in front of us is a device for taking us step by step to that point where we may realize that the real story is the one that emerges from Lobey's very act of telling his story. We may begin with relative stability in point of view, with relative harmony in Lobey's presentation of his world, but by the end of the novel this has all changed and we are allowed to see an entirely different world from that with which we began.

Perhaps the most significant discovery Lobey makes is made in terms of his recognition that his world continually is engaged in change. Lobey informs us "the year I was born a rash of hermaphrodites" were born and "the doctors thought I might be one" (p. 6). Lobey's very birth suggests that it is indeterminate. Further, Lobey's quest for Friza becomes a journey towards discovery of self and the nature of identity. However, within the inner story of the novel Lobey, as musician, will never make this discovery. The discovery remains to be realized by the reader who comes to understand that Lobey, as author, is a narrator agent who has already arrived at the

conclusion that his purpose and function is inseparable from the nature of his art. His function as author is to tell his own story; this is implicit in the narrative strategy of the novel and involves that which has been already discussed. Once Lobey discovers his identity he does not talk about it but rather presents it—and that is *The Einstein Intersection.*

In *The World We Imagine,* Mark Schorer suggests

> The virtue of the modern novelist—from James and Conrad down—is not only that he pays so much attention to his medium, but that, when he pays most, he discovers through it a new subject matter, and a greater one. Under the "immense artistic preoccupations" of James and Conrad and Joyce, the form of the novel changed, and with the technical change, analogous changes took place in substance, in point of view, in the whole conception of fiction. And the final lesson of the modern novel is that technique is not the secondary machination, a mechanical affair, but a deep and primary operation; not only that technique *contains* intellectual and moral implications, but that it *discovers* them.[24]

Under the artistic preoccupations of writers such as Samuel R. Delany, the narrative art of the science-fiction novel has changed. The final lesson of the novel may well be, as Schorer suggests, "that technique is not secondary. . .but a deep and primary operation." However, it has become increasingly clear that technique may not be separated from the subject matter it gives rise to and expresses in the novel.

The form of *The Einstein Intersection* grows out of this deep and primary operation concerned with the nature of technique. It is a technique which manifests a world view whose ideas come from the implications of Einstein's theory of relativity and Goedel's limitative theorems and which leads us to suggest that a new form of organicism has arisen. The "new organicism," however, unlike that of the nineteenth century, is not based on a set of metaphors which present us with a picture of nature. Rather, this "new organicism" finds its expression and justification in the abstract models science creates in its attempt to penetrate to the underlying structure of the universe. Further, these "scientific" models, rather than capturing the nature of reality only present and define an event, thereby producing the radical shift in the art of the science-fiction novel which has been discussed in this essay. Yet the very term "organic" itself seems limited in its ability to suggest what has taken place in the nature of the science-fiction novel since it seems to suggest that it is somehow

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[24] Mark Schorer, *The World We Imagine,* New York: Farrar, Straus and Giroux, 1968, p. 10.

in touch with nature. And, as I have shown, modern science (mathematical physics) never lays bare the underlying reality of the universe but only leads us forever deeper into the realm of abstraction and symbolism. But the symbols change. They may lead us deeper into abstraction, but the creative act remains the center to which all our efforts are ultimately directed. What we have seen in this paper, then, is that the creative act, like all products of the imagination, like science itself, is indeterminate. All we can possibly hope to accomplish is to illuminate the paths which the imagination takes in the hope that somewhow knowledge will be the result, and that knowledge will be ephemeral and indeterminate.

ARE SOME BANKERS "CRYING WOLF?"

by CAROLE E. SCOTT*

Actions taken by banks in the go-go 60's to chase the earnings "carrot" have today placed some in the shadow of the Securities and Exchange Commission "stick". In the 60's many banks set up bank holding companies in order to enter lucrative, less regulated, non-banking markets, an action which put them under the scrutiny of outside auditors and the SEC. In the fall of 1975 the Financial Accounting Standards Board issued a foreign currency translation standard which precludes banks from smoothing out fluctuations in currency values by the use of balance sheet reserves, which had been their practice in the past. Bankers fear that the next step will be a current value approach to loans, and they are speaking out against such a standard.

At the National Association of Accountants meeting in June, 1976, Walter B. Wriston, chairman, Citicorp, painted a dire picture of future unemployment, bankruptcy, inefficient allocation of resources, and consumers unable to obtain either mortgages or insurance as the result of a requirement to use current value accounting. (Wriston is probably aware of the successful effort to stop Congressional action on restructuring financial institutions and of the role of construction unions which are afraid there will be a reduction in mortgage lending.)

One could, of course, have expected a negative reaction by executives of any firm which, as a result of changing accounting methods, would report a lower and/or more fluctuating level of earnings. Their fear, of course, is that this will reduce the price of their firm's securities. Clearly such executives believe that security prices are correlated with reported rather than real income and/or the capitalization rate is not increased by uncertainty about the size of the possible divergence between reported and real income.

Obviously, it is only by matching current revenues with current, rather than historical, costs that investors can be assured that profits are adequate for a company to remain in business. Presumably, Wriston doesn't believe most investors are aware of this, or he prefers to keep them ignorant of the true size of profits.

If, due to using original cost rather than current value, investors continue to pour money into a firm not earning enough profit to remain in business, resources are being misallocated. Such an exist-

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ing misallocation wasn't mentioned by Wriston. Current value accounting is, he says, simply "an attempt to foster intellectual conceptual purity in accounting".

"Constant dollars are an economic concept and not an accounting one," he says. Why? Because, he says, people receiving pension checks and standing in grocery store lines are dealing with current dollars. Apparently Wriston hasn't noticed the widespread discontent of both these groups with the lesser purchasing power of these dollars. Perhaps Wriston thinks that labor unions which demand escalator clauses in their contracts geared to the price index are exceptionally sophisticated, but certainly he can't really believe such sophistication is typical of complaining welfare recipients.

Wriston says that the economic reality of a transaction will not be affected by switching to current values, only how it is reported. Revenues and expenses will simply be shifted. (Accrual accounting already allows for a lot of this.) The short-term effect will, however, be to "significantly influence whether or not a particular, and otherwise desirable, business transaction is to be undertaken."

In effect, Wriston is saying that one sets his freezer at the same temperature regardless of whether the scale is Fahrenheit or Centigrade. Certainly most executives are more intelligent than this! As long as original cost is used, uneconomic business transactions will be undertaken because price will not be set high enough to cover real costs; thus, the economic reality of a transaction will be changed by using current value accounting, and this change will be for the better.

Wriston contends that current value accounting will make it increasingly difficult to obtain insurance, because insurance regulators use the so-called Kenny ratio to determine how much insurance may safely be written by a given company. This ratio gives the annualized premium as a multiple of an insurance company's net worth. This ratio would, says Wriston, gyrate wildly if statutory surplus was computed in accordance with current-value accounting. Are insurance regulators so incompetent that if the meaning of this ratio is changed they will not alter their interpretation of it? Certainly we can count on the insurance industry to bring this change to their attention. Is this ratio being used because it doesn't represent reality? Wouldn't current-value accounting better portray reality? After all, the amount of insurance it is safe for an insurance company to write depends on the actual liquidation value of its assets, not what may appear on its books. That's why there's a law against what Mutual Equity Funding did: put phony assets on the books. Yet, by allowing original cost accounting, we permit companies to achieve the same result obtained by Mutual Equity: misstatement of assets' value *i.e.*, not market, replacement, or earning power.

It seems that Wriston doesn't read even the most popular busi-

ness publications. He claims that only a relatively small group of accounting theorists are demanding current-value accounting; yet, William Blackie, former chairman of the board of Caterpillar Tractor Company was quoted in *Business Week* in 1974 as saying that the SEC should push ahead without delay in requiring some form of price-change accounting, because, otherwise, we are basing policy on an illusion.[1]

Bankers and other lenders, Wriston says, do not demand current-value accounting because one of their first rules is to study comparable data over time. What's comparable about accounting statements based on original cost?

Over an inflationary period a firm now shows a rising book value of tangible assets, even though there has been no physical change in them, because replacements have cost ever more. The resulting book value doesn't represent either market, replacement, or earning power value, because of the different-valued dollars involved.

Wriston says that accounting conventions should not drive business decisions, but should reflect them in a meaningful manner. What's meaningful about original cost? Do bankers ignore liquidation values of collateral or assume book-values are liquidation values?

"If lenders are required to reprice their long-term financial assets to market value each month-end with the resultant offset against earnings," says Wriston, "they will obviously be strongly motivated to purchase only securities with very short maturities which are relatively unaffected by changes in interest rates." He ignores the offsetting, greater variance in long-term return this would cause. Would only short maturities necessarily be bad? If bankers had followed this policy in the past they would have avoided the REIT disaster. (Maybe Hamilton National wouldn't have gone under.)

States and municipalities will, he says, be forced to finance themselves on a short-term basis, as their long-term obligations will no longer be attractive. Many people holding New York City debts would be better off if this had been the case in the past. New York City would be better off too, as it wouldn't have been able to operate so long with expenses exceeding revenues.

Wriston says that today many companies which could be are not being forced into bankruptcy by banks, and this saves thousands of jobs. With current value accounting, he says, banks will lack the incentive to work out problems with borrowers. Instead, they will throw them into bankruptcy. Did lending more to W.T. Grant's save any jobs? Didn't it cause more job loss by causing suppliers to extend

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[1] William Blackie, "The Need for Inflation Accounting," *Business Week*, March 30, 1974, p. 16.

more credit to Grant's, causing them not to be able to survive Grant's failure? And what about the jobs that could have been created by anothr company if it had been lent this money instead of Grant's? Wriston conveniently ignores opportunity cost.

Wriston is very concerned with bank holdings of foreign currencies whose value sometimes changes substantially and does so in a short period of time. He wants to ignore short-term changes. But shouldn't assets exposed to devaluation be considered a cost of business and be covered in price? If such devaluations are not considered, price will likely not cover this cost. Wouldn't Franklin National, heavily involved in currency speculation, have been less likely to go bankrupt if it had had to comply with the foreign currency translation standand? The Franklin National failure serves as a partial rebuttal to Wriston's claim that meaningful data will not be generated by the foreign currency translation standard. As "proof" of this claim that currency translation is a disaster, he points to Citicorp's swing from a $12 million foreign currency gain to an $8 million loss between July 1 and August 30, 1973, while, with a similar currency position, experiencing only a 2 percent impact on total earnings over two years ending in 1974. But Citicorp couldn't know in advance that there would be a 2 percent (of what?) change over two years. In the short-run one needs to know if very short-term upswings are offsetting downswings.

Certainly fluctuations in income will be less the less frequently one computes income, but is Wriston going to suggest that financial statements cover five or ten year periods? This practice would smooth out income fluctuations and, thus, following Wriston's logic, result in higher security prices.

The Citicorp Chairman argues that a price index fails to measure qualitative differences and increases in productivity. Yet, he is opposing a new accounting standard for banks, and these problems are insignificant for providers of services like banks. Replacement cost for equal productive capacity can be used, and is being used, in lieu of a price index as a way of solving these problems. Wriston agrees that the use of replacement cost instead of historical cost "is simply an intelligent attempt to produce the cash flow necessary for increased capital investments." For monetary assets, adjustment on the basis of a price index is, in effect, replacement cost.

Wriston ignores the more equitable taxation of earnings which will result from government acceptance of current value accounting. Wriston says that "we run a very real danger that the secondary consequences of rule changes will be devastating for our society." Perhaps our existing accounting standards have had devastating primary and secondary consequences for our society which will continue as long as we continue using them.

ABSTRACTS OF MASTER'S THESES AND SPECIALIST IN EDUCATION PROJECTS

Abbott, LaVerne M. (Specialist in Education, Elementary Education, August, 1975)

CHANGES IN PHYSICAL FITNESS AND SELF-CONCEPT DURING A PHYSICAL DEVELOPMENT PROGRAM

The purpose of this study was to determine the effects that practice in calisthenics has on physical fitness. Change in self-concept during a program of physical fitness was also investigated.

Fifty-two fifth grade students at Due West Elementary School in Cobb County, Georgia were randomly selected for the study. Twenty-six students were in the experimental group and twenty-six students were in the control group. Each group was given the AAHPER Youth Fitness Test and the Piers-Harris Children's Self-Concept Scale as a pretest and as a posttest.

The treatment consisted of calisthenics and a program of training and practice on certain physical activities for the experimental group. This treatment was for thirty to forty minutes each morning during the regular physical education period for five weeks. The control group had no calisthenics, but they participated in a regular physical education program of team games. Fifth grade classroom teachers were the instructors for the investigation.

The Mann-Whitney U, a nonparametric devise using rank order, was used because the kinds of raw scores on the subtests differed. The .05 level of significance was chosen as the level at which the hypotheses would be rejected.

There was found to be no significant difference on pull-ups, flexed arm hang, shuttle run, girls standing broad jump, fifty yard dash, boy's sit-ups, softball throw for distance, 600 yard walk-run or self-concept. There was not a significant correlation between self-concept and physical fitness.

There was found to be a significant difference at the .05 level of confidence for girls on sit-ups and for the control boys' group on standing broad jump.

The investigation seems to indicate that calisthenics done ten minutes per day for five weeks do not make a significant difference in physical fitness. Further the data from this study indicates that there is no significant correlation between physical fitness and self-concept.

Buice, Edwin C. (Specialist in Education, Guidance and Counseling, August, 1975)

EVALUATING STUDENTS SUCCESS IN REGULAR PROGRAMS AFTER PARTICIPATING IN THE WORK SAMPLE EVALUATION CENTER AT WALKER COUNTY VOCATIONAL-TECHNICAL SCHOOL

A group of thirty students who had participated in the Work Sample Evaluation Center and then entered the regular program were compared with a random sample of thirty students from the regular program. Grades, absences, and dropouts were compiled on both groups for two quarters. The mean grade average of the Evaluation Center group was 2.96 while the Regular group's mean was 2.87. There was no significant difference between the two groupson grades at any level. The mean absences for the Evaluation Center group was 4.17 while the Regular group's mean was 6.47. The results for absences were significant at the .10 level, but not at the .05 level in favor of the Evaluation Center group. The dropout rate for the Evaluation Center group was 13.3 percent while the Regular group's was 16.7 percent. There was no significant difference between dropout rates on the two groups. It was concluded from the study that the Evaluation Center has done an adequate job in helping their students choose and enter a regular program. Furthermore, it was recommended that a study be conducted following Evaluation Center Students all the way through school and at least six months on the job.

Bundy, Lynn Oliver (MA, Psychology, June, 1975)

TIME STRUCTURING IN DREAMS; AN APPROACH THROUGH TRANSACTIONAL ANALYSIS

Berne's Transactional Analysis model of time structure was used to descriptively analyze a sample of 165 dreams. The dreams were obtained from 13 volunteers who recorded them over a period of three weeks. Each dream was broken down into single, basic units of time structure and referred to as dream segments. The dream segments were then each classified according to Berne's model; 1) Withdrawal, 2) Ritual, 3) Activity, 4) Pastime, 5) Game or 6) Intimacy.

Twenty-six percent of the dream segments were found to lack social context and were considered not applicable for classification. Of those segments classified, 48% were found to be Game oriented. The remaining 52% were scattered somewhat evenly between the other five methods of time structure.

Callins, Mary A. (Specialist in Education, Guidance and Counseling, August, 1975)

ENGAGING HIGH SCHOOL SENIORS IN DECISION MAKING PROCESS LEADING TO THEIR MAKING CAREER CHOICES

Every year the number of students undecided about career choices increases which emphasizes the fact that the career development needs of students are not being met. These students have difficulty making the important decisions that are required in the planning and realization of a career. The need for a planned systematic approach to help these individuals with decision making skills regarding career choices and life roles as a whole is evident in the majority of studies and articles cited. The investigator used an approach using pre-post test, slides, filmstrips, and career games with a group of six students undecided about a career. This method was used to help the students gain awareness of themselves in terms of abilities and interest, to gain skills in making decisions, to increase knowledge of occupations and training, and to examine choices through orientation and exploration. The subjects met two hours for eight sessions. There was some evidence of success with the approach used. The effectiveness of the research was weakened because the group was very small and there was no control group for comparison. A follow-up is desirable on each student to test the consistency of choices made.

Chalfant, Donald W. (Specialist in Education, Secondary Education, June, 1975)

HOW THE PRESSURE OF TIME IS RELATED TO THE WRITTEN RESPONSES HIGH SCHOOL STUDENTS MAKE TO SELECTED SHORT STORIES

The written responses of 54 high school students to six short stories under untimed and timed conditions were investigated in order to determine if there were differences in the scattering of responses attributable to the time variable. Approximately half of the students were given unlimited time for written responses to each story while the other half were given a time limit of four minutes.

The following null hypotheses were tested:

1. There is no significant difference in the patterns of written responses high school students make from one short story to another.
2. There is no significant difference in the patterns of written responses made by male and those by female high school students to the short stories selected.
3. There is no significant difference in the patterns of written responses male high school students make to selected short stories under untimed versus timed testing conditions.
4. There is no significant difference in the patterns of written responses female high school students make to selected short stories under untimed versuds timed testing conditions.

A chi-square test with a seven contingency table was used to interpret the data. Both the short story variable and the variable of sex were found to be significant at the .01 level, and the variable of untimed versus timed conditions was found to be significant at the .05 level for both male responders and for female responders.

Two implications were derived from the study:

1. Time limitations on responses to literature limit students' full range of written expression.
2. Sex differences and individual differences in response to literature indicate the need to provide students with a number of literary selections containing a large range of possibilities for adolescent identification and involvement.

Crook, Morgan Ray, Jr. (MA, Psychology, June, 1975)

INSTITUTIONS OF ABNORMAL BEHAVIOR IN THREE PRIMITIVE SOCIETIES: AN EVOLUTIONARY MODEL

The concern of this thesis is the evolution of institutions of abnormal behavior viewed in cross cultural perspective. The cultural systems of the Arunta, the Nuer and the Trobriand Islanders are utilized as examples of the three socio-cultural levels of integration within Primitive society. Abnormal behavior institutions are less productive than the productive norm of the cultural system and their existance is dependent upon economic support from the productive norm. Therefore as energy capture per capita increases, more institutions of abnormal behavior occur. The relationship between institutions of abnormal behavior and the energy capture of the cultural system is plotted statistically within the thesis.

Dodds, Robert J. (Specialist in Education, Guidance and Counseling, August, 1975)

THE EFFECT OF CAREER EDUCATION COURSES ON PERCEIVED POST-GRADUATION OCCUPATIONAL PLANS OF EIGHTH GRADE STUDENTS

Within the last few years there has been an enormous increase in the emphasis on Career Awareness in American Education. As a part of this emphasis a Career Education Program was introduced into the curriculum of LaGrange Boys' Junior High School. This study is a follow-up of three years of this program. It is not the intent of this research to evaluate the entire program. It is the author's purpose to study only one aspect of the program, namely, to determine if those students who participated in this particular program make a higher percentage of appropriate selections on a Post-Graduation Occupational Plans Questionaire than do those who do not participate in the program.

The subjects of the study included the entire eighth grade class of 206 boys. The students were then divided into two groups according to whether or not they took Career Education courses. Their reponses on the Post-Graduation Occupational Plans Questionaire were then compared with their records and classified as appropriate or inappropriate selections.

Results of the study seem indicative that participation in the Career Education Program had no measurable effect upon the selection of appropriate occupational goals. There is some indication from the control group figures that a longitudinal study with pre-post evaluation might show positive results from this program.

Farrior, David Truitt (Specialist in Education, Guidance and Counseling, June, 1975)

DEVELOPING AND EVALUATING AN AUDIO-VISUAL ORIENTATION PROGRAM AT WALKER COUNTY TECHNICAL SCHOOL

An audio-visual orientation program was developed for use at Walker County Technical School. In order to evaluate the program, it was compared with the traditional orientation program. Forty-six entering students participated in the study. Twenty-three individuals were randomly assigned to the experimental group in which orientation information was presented to the group by using audio-visual equipment. The other twenty-three students participated in the traditional, lecture-type orientation program. An information test was

administered to both groups before and after the orientation programs. On the twenty-item test, the mean gain for the experimental group was 4.57 and 3.96 for the control group. The post-test results were significant at the .10 level but not at the .05 level in favor of the experimental group. It was concluded from the study that the audio-visual program was as effective as the traditional program in presenting orientation information to entering students. Furthermore, it was recommended that the audio-visual orientation program be permanently implemented at the school.

Fulks, William N. (Specialist in Education, Guidance and Counseling, August, 1975)

A PILOT PEER COUNSELING PROJECT AT LAFAYETTE HIGH SCHOOL

An experimental study was conducted using peer counselors with ninth grade students at LaFayette High School in LaFayette, Georgia. The purpose of the study was to expand the guidance services, to evaluate the effects of peer counseling, to determine the feasibility of such a program being adopted, and to determine the extent to which the program would be accepted by the staff and students.

The basic problem of the investigation was to determine if peer counselors would be effective by evaluating certain criteria. Evaluation was made on counselee response on pre- and post-test of the Tennessee Self Concept Scale (TSCS); evaluation of grade point average was made on pre- and post-measurements; and subjective evaluation of personal growth of peer counselors.

A review of the literature was conducted in the area of peer counseling. On the basis of this review, the use of peer counselors in helping relationships was supported. The literature revealed that individuals and institutions are increasingly using peers as helpers in a number of educational settings.

A tutorial program served as an adjunct to the peer counseling program. The sample for the investigation consisted of six senior peer counselors who tutored twelve ninth grade low-achieving students. The training program for the peer counselors consisted of ten sessions which ran concurrent with the tutorial program.

An analysis of a t-test of significance indicated that there was no significant difference between grade point average means at the .05 level for the counselees' pre- and post-measurement, although there was significance at the .10 level. All subscale means of the Tennessee Self Concept Scale (TSCS) improved except one (moral self). However, the change was not significant at the .05 level. Subjective observations, consultations, and feedback indicated greater personal

growth of the peer counselors as a result of actively participating in the peer counseling program.

Garrett, Jane B. (Specialist in Education, Guidance and Counseling, August, 1975)

IMPLEMENTATION OF AN OBJECTIVE-BASED GUIDANCE PLAN

In an effort to clarify the role of the counselor and to verify the effectiveness of guidance services, an objective-based program was developed in calendar form and the program was implemented throughout the year.

Students' perceptions of guidance services were relatively unchanged through implementation of an objective-based program, however student performance changed through implementation of individualprocess objectives. Teachers exhibited a more positive opinion of guidance service after the program was implemented.

The counselor in the objective-based program provided services for more students and the services were more directed toward student needs than a control group in traditional programs.

Hickson, Margaret E. (Specialist in Education, Early Childhood Education, June, 1975)

A STUDY OF THE TRADITIONAL APPROACH VERSUS AN INCIDENTAL APPROACH IN TEACHING SPELLING AT THE SECOND GRADE LEVEL IN THE MAPLE STREET SCHOOL CARROLLTON, GEORGIA

Spelling is a basic element of communication and learning, the importance of which should not be over-looked. The purpose of this study was to determine if an incidental approach to teaching spelling had an equally positive effect on spelling achievement as did the traditional approach to teaching spelling.

The subjects for this study were two second-grade classes at Maple Street School in Carrollton, Georgia. The subjects were placed in each classroom without regard to mental ability, academic achievement, or socio-economic back-ground.

The control group, a class of twenty-four students, was taught spelling using the traditional approach. The experimental group, a class of twenty-five students, was taught spelling using an incidental approach. The study lasted twelve weeks at the end of which time a posttest was given over the words, randomly selected, that had been

studied only by the control group. a delayed posttest was given after the eighteenth week of the study over the words, randomly selected, that had been studied only by the control group.

The results of the posttest and the results of the delayed posttest showed that the control group and the experimental group were equal in achievement. The statistical test for this study was the Mann Whitney U Test converted to a z formula with a correction for tied scores.

The conclusion was that the results were of such a nature that the difference could be attributed to chance.

It is recommended that similar studies be conducted to assess the effect of the incidental method when subjects and teachers are selected from different schools and different areas.

Highley, Jackson Herschel (MA, Psychology, June, 1975)

THE DEATH OF SUICIDE: THE HUMOR OF MORBIDITY

The purpose of this study is to explore the interrelationships between the topics of laughter and death. Suicide is not a funny act. Yet it is sometimes parodied in the Black Humor literature. Is laughing at the morbid a repression mechanism, or, is it a psychological device that helps affirm the realities of death and of life? Through a literature review, the experimenter found the human tendency to laugh at grim realities, especially of suicide.

Humor appears in unusual circumstances. And so does suicide. One might laugh to avoid committing suicide. Or, one might commit suicide to avoid the laughing.

Alternative approaches to suicide research openly discuss suicide, place few or no moral judgments on suicides or suicide-attempts, rely on individual experience rather than statistics, and promote individual liberty in a theme of high regard for human life. All of these approaches are in the humanistic tradition that one should be able to choose his experiential world.

Dichotomizing is a narrow form of perception concurrent with the view of taking oneself and the world seriously. Surrendering is creative and imaginative reconstructions of the situation.

In laughter is the determination to continue the struggle to live. Perhaps in enjoying the humor of morbidity there is a "death of suicide", as the serious urge to terminate no longer seems so important. Hence, the investigation into the "topic of suicide" gives way to a rebirth of exploring other alternatives to live.

For the comic perspective plays a significant role in individual and group expression. By not taking ourselves so seriously, man begins to understand himself and his brother. The comic perspective

defies putting existence under the aegis of rational law, moral conventions, social structures, or considerations of worth or utility. Inverting a system of categories, humor continually thwarts arbitrariness. In our attempts to control, we lose touch with the reality around us. Furthermore, in holding our convictions with some lightness, we add grace to our life. Expressing a state of inner harmony, the realm of play is an experience of fullness.

Holcombe, Richard B. (MA, Psychology, August, 1975)

DYING, DEATH, AND SUICIDE: A PSYCHOLOGICAL, POETIC, AND PERSONAL INQUIRY

In this paper, the human awareness of death and dying is explored in the following ways: the role of the will of the individual in his own death, several general propositions about the individual's concept of death, and the author's recollection of a friend's experience of death, and its impact on both of us. The author relates a series of mystical and psychic experiences that culminated in the friend's experience of dying. That series of events had a profound effect upon both the author and his friend.

The poetic consideration of death is explored in the works of Ezra Pound and T.S. Eliot. The author notes the impact of both poets upon literature and their generation, comparing the wholeness or completed gestalt in Eliot's work to a lack of such in Pound's work. The "Savage God" presented by A. Alvarez appears under a similar guise in the poetry of T.S. Eliot. In his later work T.S. Eliot spoke increasingly of an ordered, meaningful aspect of life and experience. Death and its acceptance in the works of Leo Tolstoy, Elisabeth Kubler-Ross, and John Gunther are presented. The reasons for modern man's search for a soul are explored. The death of Ivan Ilych is seen as an ideal.

A focus for considering suicide is found in the life and work of Sylvia Plath, American author and poetess who took her own life. Her beautiful and morbid poetry illustrates a particularly complex and poignant comtemplation of a self-inflicted death and is analyzed with a view to understanding the suicide's inner vision. The issue of understanding suicide and the suicidal person is examined in the writings of Shneidman, Farberow, Szasz, and Karl Menninger.

Kerr, Julia A. (Specialist in Education, Elementary Education, August, 1975)

A SYSTEMATIC SURVEY OF THE LITERATURE CONCERNING THE RELATIONSHIP BETWEEN SELECTED AUTHORITIES IN THE FIELD OF AMERICAN EDUCATION AND SELECTED PROPONENTS OF HUMANISTIC EDUCATION

Long, Mary F. (Specialist in Education, Early Childhood Education, August, 1975)

THE HISTORY OF THE SETTLEMENT OF THE NEWMAN AREA WITH EMPHASIS ON SELECTED HOMES BUILT BETWEEN 1830-1900

This historical research was designed in two parts. One part was an in-depth research paper on the location and settlement of the Newnan area, with emphasis on the early Indian inhabitants of the region. The other part being a slide presentation of nineteen outstanding homes built in this area between 1830 and 1900 and for which this area is famous. The research was accomplished so that elementary school children could be provided with a segment of local history in celebration of the Bicentennial of the United States. The completion of the research also coincided with the Sesquicentennial year for the city of Newnan. The written part included extensive research into local and state histories. The slide presentation involved visiting each home, interviewing the present occupants, and securing permission to use the residences in this work. After the written work was finished, final approval was secured from the owners.

The researching of the settlement of the Newnan area from the Atlantic Ocean to the present location was designed so that students would see the place of Coweta County in the total settlement of Georgia. This area, famous for antebellum homes, featured homes chosen from several locations in the county so that school children in the outlying areas, as well as those in the city of Newnan, would be able to see at least one of the homes studied.

This project placed in one central location the history of this area so that teachers could have access to the material and this removed one major obstacle encountered in the teaching of local history.

Matthews, Elvera D. (Specialist in Education, Secondary Education, August, 1975)

EFFECTS OF CHOICE OF COUNSELOR ON SELF-DISCLOSURE OF JUNIOR HIGH STUDENTS

Choice of counselor and whether this choice significantly affects self-disclosure among junior high students was examined in this research. Two full time counselors, one male and one female, at Jonesboro Junior High School, Jonesboro, Georgia, interviewed sixty-four, eighth grade subjects who were randomly selected to participate. These subjects comprised four groups of sixteen subjects each (eight males and eight females). Each of the two counselors had a no-choice and choice group. The instrument that was used was a set of seventy-one pictures which were presented to each subject, and their responses were recorded on a data sheet. Data were analyzed by a standard statistical procedure using the t-test. The computed t-value at the .05 level of confidence was 1.87. These results deomonstrate no significant differences between self-disclosure in choice-of-counselor groups and no-choice of counselor groups. Further analysis of the data shows that the computed t-value of data concerning the effects of sex of counselor on subjects' self-disclosure was 3.26 at the .05 level of confidence. This indicates that the sex of counselor significantly affects the self-disclosure of subjects.

Moore, Elizabeth D. (Specialist in Education, Business Education, August, 1975)

A STUDY TO DETERMINE THE MOST EFFECTIVE WAY TO TEACH PROOFREADING TO BEGINNING TYPEWRITING STUDENTS AT THE SECONDARY-SCHOOL LEVEL

Problem

The problem was to determine the most effective way to teach proofreading to beginning typewriting students at the secondary-school level.

Subproblems

The first subproblem was to determine whether teaching proofreading using a positive approach was effective in teaching high school students to proofread in beginning typewriting classes.

The second subproblem was to determine whether teaching proofreading using a negative approach was effective in teaching high

school students to proofread in beginning typewriting classes.

The third subproblem was to determine whether students learned to proofread effectively without being taught specific proofreading methods and techniques.

Procedure

Six beginning typewriting classes at Cherokee High School participated in this study to determine the most effective approach to use when teaching proofreading. These classes were assigned to either a control group, a positive experimental group, or a negative experimental group.

The control group received no proofreading instruction and was treated with a neutral approach. Both experimental groups received proofreading instruction, but one was treated with a positive approach while the other was treated with a negative approach.

All three groups spent ten days on each of three units: business letters, tabulation problems, and manuscripts. The experimental groups were taught proofreading methods and techniques in addition to the normal class schedule followed by all the groups.

The grading plan for production typewriting used in all three groups did not change from the normal grading plan followed by the teachers. However, after the grade had been figured on the assignment, the positive group had bonus points added for accurate proofreading and the negative group had points deducted for a lack of proofreading. Proofreading drills in the positive group were graded by adding points for each error found; whereas, the drills in the negative group were graded by subtracting points for errors left undetected.

All three groups were given proofreading and typewriting pretests, achievement tests on each unit, and proofreading and typewriting posttests.

Natour, Fahmi (MA, Psychology, August, 1975)

THEORETICAL ANALYSIS OF ANXIETY AND ITS RELATIONSHIPS TO LEARNING PERFORMANCE AND PERSONALITY

In addition to many basic differences among different schools of psychology, undergraduate and graduate psychology are divided into somewhat arbitrarily defined course areas. This means that many interesting problems of psychology lie in the cross-relationships of these arbitrary divisions and subdivisions.

The objective of this thesis is to deal with the issue of anxiety from the perspective of two different yet related course areas: Learn-

ing and motivation and theories of personality.

I shall discuss, compare and contrast the types of methodologies used and the major theoretical approaches of these two areas.

The underlying premise of this thesis is to demonstrate the importance of cross-relationships among different areas and finally to draw special attention to the yet unanswered questions about anxiety.

Chapter one considers the area of learning and motivation and how the issue of anxiety is handled in this area. The discussion will center around the Hullian Drive Reduction Theory as a representative of this area. The learning theory approach is compared and contrasted with the ethological approach.

Chapter two considers the application of the Drive Reduction Theory to the area of personality and the role of anxiety in personality. The learning theory approach is compared and contrasted with the personality approach.

Chapter three consists mainly of my own suggestions and what I see as the important questions that remained unanswered. These are basically my own speculations that grew out of my frustration with the published literature I have reviewed for this study. The conclusion is reached that anxiety should be defined as the uncertainty about something important and considered as an all-or-none fashion phenomenon. Finally, anxiety should be considered to have no enhancing effects and to be disruptive.

Ruskell, Virginia Ann (MA, English, August, 1975)

THE INFLUENCE OF THE YOGA PHILOSOPHY IN THE BHAGAVAD GITA ON HENRY DAVID THOREAU'S WALDEN

The *Bhagavad Gita* is a Sanskrit classic which contains three different yoga philosophies: karma, jnana, and bhakti. Karma or action yoga is the pathway to union through desireless action. Jnana or knowledge yoga is concerned with gaining wisdom and perceiving reality. Bhakti yoga is the yoga of love and devotion and results in dedicating one's life to God. These three philosophies are examined in the *Gita* which is a philosophical discourse between Krishna, the teacher, and Arjuna, the pupil.

Henry David Thoreau read the *Bhagavad Gita* while he was at Walden pond. That it had a profound effect on him is shown in his inclusion of the book and its philosophy in *Walden.* This book is the story of his stay at the pond, but it also is an account of Thoreau's struggles with yoga and how he became a liberated man.

Shahan, Kay Salmon (Specialist in Education, Business Education, August, 1975)

AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS OF THE INDIVIDUAL PROGRESS METHOD AND THE TRADITIONAL METHOD IN TEACHING SHORTHAND

The problem of this study was to compare the achievement of high school students who were taught shorthand by the Individual Progress Method with students who were taught shorthand by the Traditional Method.

Four teachers were involved in the study. Two taught their classes by the Individual Progress Method (experimental group) and two taught their classes by the Traditional Method (control group).

The experimental group learned shorthand through the use of cassette tapes, programmed for each lesson. Students in this group were allowed to progress at his own rate with no restrictions on the time taken to complete each lesson. The control group learned shorthand through teacher-directed activities, according to the suggestions in the handbook accompanying the traditional shorthand textbook. Students in this group progressed in unison, covering one lesson a day.

Data were collected from theory tests, shorthand reading tests, transcription tests, and dictation tests. These tests were analyzed through the use of the t test to determine significance.

Based upon the findings of the study, the following conclusions were reached:

1. There is no significant difference in achievement on theory tests between the experimental group and the control group which can be attributed to the two methods of teaching shorthand. Two of these tests were significant. One was favorable to the experimental group, and the other was favorable to the control group. Therefore, the general conclusion is still substantiated.
2. There is a significant difference in achievement on reading tests between the experimental group and the control group which can be attributed to the Traditional Method of teaching shorthand.
3. There is no significant difference in the achievement on transcription tests between the experimental group and the control group which can be attributed to the two methods of teaching shorthand. Two of these tests were significant. One was favorable to the experimental group, and the other was favorable to the control group. Therefore, the general conclusion is still substantiated.
4. There is no significant difference is the achievement on dictation tests between the experimental group and the control group

which can be attributed to the two methods of teaching shorthand.

5. The Individual Progress Method is more effective in learning shorthand theory and developing dictation skills than it is in developing reading ability.

6. The individual Progress Method has no adverse effect on achievement of the students taught by this method.

Smith, David A. (Specialist in Education, Administration and Supervision, August, 1975)

AN ANALYSIS OF ATTITUDES HELD BY FORMER STUDENTS TOWARD WEST GEORGIA COLLEGE'S GRADUATE PROGRAM IN ADMINISTRATION AND SUPERVISION

This study represented an effort to obtain opinions of former graduate students concerning West Georgia College's Administration/Supervision program. Its general purpose was three-fold. First, to learn the perceptions of former students toward their adequacies in their administrative or supervisory role. Second, the student's perceptions of the adequacies of the preparation program; and finally, suggestions for improvement of the Administration/Supervision program.

The data were collected by means of a questionnaire mailed directly to all persons who have completed the Master of Education Degree or Specialist in Education Degree programs in Administration/Supervision at West Georgia College. The questionnaire was divided into sections dealing with personal information, perception of their administrative or supervisory role adequacy, preparation given by the program, suggested improvement for the program, and possible differences between on-campus and off-campus courses.

The data collected and developed revealed a majority of the former students perceived their adequacy in their administrative or supervisory role as above average or excellent. Ninety-six per cent of the respondents stated that they would recommend West Georgia College's Administration/Supervision program to a fellow teacher.

Spivey, Cathryn C. (Specialist in Education, Secondary Education, August, 1975)

A STUDY TO COMPARE VIEWS OF STUDENTS, PARENTS, AND SCHOOL PERSONNEL WITH RESPECT TO THE GOALS OF SECONDARY SOCIAL STUDIES

The purpose of this study was to compare views of students, par-

ents, teachers, and school administrators of Cobb County concerning the objectives of the secondary social studies program. Students for this study were randomly selected at Robert L. Osborne Senior High School. The parents for the study were also randomly selected from the Osborne Senior High School District. All social studies teachers and all administrators in the nine senior high schools of Cobb County were asked to participate in the survey. The four groups ranked twelve objectives of the secondary social studies program which had been extracted from the writings of leading social studies educators and from the *Cobb County Public Schools Course Guide.* An analysis of variance was computed to determine whether or not actual differences existed in the rankings of the four groups. The results revealed that differences existed in the ranking of ten of the objectives to the degree that further study was warranted. Another analysis of variance was computed for differences in the means for students-parents, students-teachers, students-administrators, parents-teachers, parents-administrators, and teachers-administrators. It was concluded that significant differences do exist among the four groups compared concerning the objectives of secondary social studies programs. The comparisons found the teachers to be the group most cognitive oriented while students were oriented more toward affective objectives.

Steele, James L., Sr. (Specialist in Education, Elementary Education, June, 1975)

THE EFFECT OF THE FUNCTIONAL USE OF STRUCTURAL ANALYSIS SKILLS ON SPECIALIZED VOCABULARY IN SIXTH GRADE SOCIAL STUDIES

A study was conducted to compare the achievement of two groups in specialized social studies vocabulary. Group A was taught social studies vocabulary by a systematic method emphasizing structural analysis and dictionary study skills in a functional, content-centered approach. Group B was taught by the teachers' usual methods.

The classes in Group A and B were heterogeneously grouped. They were considered equivalent because assignment to classes was a random process. Eight teachers were involved in this study. The researcher was not one of the teachers involved.

A posttest equivalent group design was used in the study. The data were analyzed by a t-test of the significance of the difference between the means. The results of the comparison reveal that following a systematic method for teaching specialized social studies vocabulary was not more effective than having teachers follow their usual methods for teaching.

Tyson, George R., Jr. (MA, Psychology, August, 1975)

AN INTEGRATED COGNITIVE AND AFFECTIVE APPROACH TO EARLY CHILDHOOD AND ELEMENTARY EDUCATION

This thesis is an experiential and theoretical investigation into early childhood and elementary education. The author's aim is to stress the importance of a well-integrated cognitive and affective approach to education.

Chapter I is an experiential account of the author's personal feelings and concerns regarding his child's growth and development.

Chapter II is a report of some interesting developments in infant and preschool education.

Chapter III is an integrated (cognitive and affective) approach to an elementary education for the whole child.

Chapter IV reports some of the costs and benefits such education may offer our society.

Vaughn, Eldridge V. (Specialist in Education, Guidance and Counseling, August, 1975)

THE ROLE OF THE COUNSELOR: WHAT IT IS AND WHAT IT SHOULD BE AS PERCEIVED BY STUDENTS, TEACHERS, COUNSELORS AND ADMINISTRATORS OF COLLINS HIGH SCHOOL, COLLEGE PARK, GEORGIA

This descriptive study sought to appraise the merits and/or deficiencies of the guidance program at M. D. Collins High School, College Park, Georgia as they are viewed by the students, teachers, counselors, and administrators and to define the role of the counselor in this program. Opinions were sought concerning what is now occurring in the program and what should be occurring as perceived by the four groups. These opinions were considered indications of what the groups perceive to be the role of the counselor as practiced and what they perceive to be the ideal role.

The Georgia Guidance Services Inventory was administered to all students, teachers, counselors, and administrators at the school. This instrument uses a survey technique to obtain ratings by each of the groups on five factors or areas of the guidance program. Mean factor scores were computed on each of the factors for each of the populations studied.

Wade, Priscilla M. (Specialist in Education, Early Childhood Education, August, 1975)

THE STUDY OF THE EFFECTS OF EARLY CHILDHOOD METHODS AND LANGUAGE ARTS PROGRAMMING ON BLOCK STUDENTS AT WEST GEORGIA COLLEGE AFTER ENTERING THE TEACHING PROFESSION

The purpose of this study was to determine the results of an attitude questionaire concerning the effects of early childhood methods and language arts programming on the block students at West Georgia College after they have entered the teaching profession.

Fifty-two questionaire results were tabulated. The results showed that the students felt favorable about the early childhood methods and language arts block programming at West Georgia College.

Young, Elizabeth D. (Specialist in Education, Early Childhood Education, August, 1975)

A MEASURE OF THE SPEECH INTELLIGIBILITY OF A VERBOTONALLY TRAINED DEAF CHILD

This study was designed to evaluate the speech of a four year old deaf child who had been trained for a period of two years by the Verbotonal Method of Instruction for the Deaf. Ann was one chosen from seven four and five year old nursery pupils who had been grouped according to ability and who were tutored individually for approximately ten minutes daily. She was chosen as one who was profoundly deaf, without other complications and who had exhibited a readiness to learn. For twenty days Ann's tutoring involved five expressions that were taught in sequence, using a situational story involving a man and boy crossing the street.

Eighteen pairs of judges were chosen with the qualifying factors of whether they were familiar or unfamiliar with the voice and speech of the deaf. Each judge was given a test sheet to mark in the order he heard the five recorded expressions that Ann had been taught. The Pearson Product-Moment formula, using a raw score method, was appropriate for computing the coefficient of correlation of the judges.

The analysis showed a high relationship between the scores of the two groups of judges, indicating the acceptance of the hypothesis that the Verbotonal method is effective in speech training for a deaf child and that the speech was equally intelligible to those familiar and those unfamiliar with the speech of the deaf.

Young, Frances T. (Specialist in Education, Secondary Education, August, 1975)

STUDENT GROWTH IN INTERPRETATION OF LITERARY MATERIALS: SELF-DIRECTION VS. TEACHER DIRECTION

The purpose of this study was to determine the effect of teacher-directed activities as opposed to a student-directed approach on developing eleventh grade students' skills in interpreting literature. The reading section of the Iowa Test of Academic Progress was used as a pretest and posttest to determine student progress. IQ scores from the Otis Quick-Scoring Test of Mental Ability were used to match students as pairs in the control and experimental groups. A t-test was used at the end of the study to determine whether students had made significant progress at the .05 level.

Two classes of eleventh grade students assigned to American literature classes at Pebblebrook High School, Mableton, Georgia, were used to select control and experimental groups during winter and spring quarters of 1974-1975. The findings showed no significant difference between the progress of students who were allowed to determine their own activities in the interpretation of literature and in the progress of those who were taught by a teacher-directed approach.

Beasley, William M. (Specialist in Education, Secondary Education, August, 1976)

A STUDY OF THE ATTITUDES OF THE JUNIOR AND SENIOR HIGH SCHOOL LEVELS OF CERTAIN SOCIAL STUDIES CONCEPTS

The purpose of this study was to identify differences in the likes and dislikes of junior high school students and senior high school students in regard to several teaching methods and certain social studies concepts.

The subjects for this study were students from the seventh and eighth grades at Woodstock Elementary School and students from the ninth, tenth and eleventh grades at Cherokee High School in Cherokee County, Georgia. These students were randomly selected from social studies classes at these two schools.

The survey to which these students responded consisted of eighteen statements dealing with teaching methods and curriculum content in the social studies. This survey was constructed from an open line questionnaire that asked junior high school students and senior

high school students what they liked and disliked about their social studies courses.

This study found that junior high school students tended to have a more positive attitude toward school than did senior high school students. Boys generally preferred the study of military and political history while girls generally preferred the study of cultural history. Girls tended to favor the study of cultural geography, sociology and government more than did boys.

Blake, Joy T. (Specialist in Education, Secondary Education, March, 1976)

A STUDY OF THE READABILITY LEVELS OF SELECTED STATE ADOPTED UNITED STATES HISTORY TEXTBOOKS IN USE IN THE NORTHWEST GEORGIA CESA AREA

Two instruments for measuring readability were applied to fourteen selected state-adopted United States history texts frequently used at the secondary level. According to results produced by the Fry Readability Graph, only two of the books were found to be above designated grade level. The SMOG Grading Formula, however, placed eleven of the fourteen texts above grade level. Readability levels profuced by application of the two formulas were then compared to tested reading achievement levels of students in an area school system in order to provide a further basis for consideration of results of the formulas.

Blake, Martha (Specialist in Education, Secondary Education, June, 1976)

RESEARCH IN MORAL DEVELOPMENT: A SYNTHESIS FOR CLASSROOM USE IN SOCIAL STUDIES

This paper reviews recent research and theory in the field of moral development. Its purpose is to synthesize those results and data which influence moral growth into a planned and purposeful program of moral development for secondary public schools.

It is developed primarily from Kohlberg's research in moral development. It integrates other research and data which appear to supplement or reinforce Kohlberg's conclusions.

As such, it presents a program of education which offers maximum opportunity for the moral development of the student as to his potential both in moral judgment and in moral action, while avoiding

(by its very nature) the two extremes of aimlessness and of indoctrination. Both the cognitive and affective domain are recognized as important to this process.

Recent trends and innovations in the new social studies are integrated into this program which may be utilized by a system, a school, or an individual classroom teacher.

Brannon, Sharon A. (MA, English, August, 1976)

SUT LOVINGOOD: RENAISSANCE FOOL IN EAST TENNESSEE

George Washington Harris created Sut Lovingood as a "nat'ral born durn'd fool." To what extent Sut is a "fool" in the traditional sense of the word is examined in this paper.

The first chapter deals with the proper definition of a "nat'ral fool" and its uses from its first application in Greece and Rome to the Renaissance. The Renaissance fool is especially examined and the distinction between a natural fool and an artificial fool discussed. The characteristics of the artificial fool examined are: his grotesqueness, his alienation from his surroundings, his freedom of expression and action, and especially his wisdom and his uncanny knack for exposing the truth. These are the basic characteristics of the artificial fool and can be seen in varying degrees in the Shakespearean fools who are examined: Launcelot Gobbo, Touchstone, Feste, Falstaff, and Lear's Fool.

The second section compares the buffoon, Till Eulenspiegel, Erasmus' Folly, and the Shakespearean fools cited in the first chapter with Sut Lovingood. It shows the similarities between these Renaissance fools and the Tennessee fool: he escapes from unpleasant situations by relying on his legs like Eulenspiegel and Gobbo; he is a wise fool much like Folly and Touchstone; he is grotesque in appearance like Falstaff; he often exposes Puritans like Feste and like Feste and Falstaff relishes the here and now; he has a sense of humanity and respects the sincere, downtrodden man as does Lear's Fool.

The final chapter deals exclusively with Sut and his characteristics as fool. Through an examination of his traits as well as numerous examples we see that Sut Lovingood is indeed a "wise fool" of the Renaissance, grotesque in appearance and candid and honest in his remarks, exposing the affectations of hypocrites while uplifting the common man.

Carroll, Valeria S. (Specialist in Education, Elementary Education, March, 1976)

A COMPARISON OF ACHIEVEMENT IN FRACTIONS BETWEEN INDIVIDUALIZED INSTRUCTION AND LARGE GROUP INSTRUCTION

This study was designed to compare results of two methods of instruction, individualized and large group, in arithmetic in the area of fractions.

Subjects used in this study were students of two sixth grade classes with a wide range of abilities. One of these classes composed the experimental group, the other the control group. There were fifty-six students in both groups at the beginning of the study but only forty-nine completed the experiment. The subjects of both groups were similar in age, sex, and economic status.

A teacher-made diagnostic test was used in the study as both pretest and posttest. The pretest was given to both groups on April 3, 1975, and the posttest on May 1, 1975, at the end of the four-week treatment period. Weekly tests were administered during the period to check the progress of material covered.

The t test was used to analyze the data and the null hypotheses were not rejected at the .05 level of significance with the exception of hypothesis 1 which was rejected.

Conclusions were that, although the change from the pretest to the posttest was not significant for either group, the difference between the mean changes was significant in favor of the experimental group. The control group means for the weekly tests were slightly higher than the experimental group means on the four basic operations of fractions through this was not significant. It was recommended that a validity and reliability pilot study be made on testing.

Chambers, Margie F. (Specialist in Education, Elementary Education, August, 1976)

AN EVALUATION OF THE EFFECT OF KINDERGARTEN EXPERIENCE, SEX, AND CHRONOLOGICAL AGE ON READING READINESS IN PAULDING COUNTY, GEORGIA

This study was to determine whether kindergarten experience, sex, or chronological age affected reading readiness of first graders. A data collection form was distributed to all first grade teachers in the Paulding County School System. The form obtained the following information for each student: sex, birth date, date of the readiness

testing, raw score on the Metropolitan Readiness Test, Form A, kindergarten experience, the length of the kindergarten experience, and whether the kindergarten was public or private.

After the data were collected, the subjects were divided into two groups designated kindergarten and non-kindergarten groups. The criteria for inclusion were one year of kindergarten experience or no kindergarten experience. All repeaters were disregarded for the study. The kindergarten group was comprised of 138 children, 67 boys and 71 girls. The non-kindergarten group was comprised of 158 children, 77 boys and 81 girls.

Three null hypotheses were tested:

1. There is no significant difference between the performance of kindergarteners and non-kindergarteners on the Metropolitan Readiness Test, Form A.
2. There is no significant difference between the performance of males and females on the Metropolitan Readiness Test, Form A.
3. There is no significant correlation between the age in months and the readiness score on the Metropolitan Readiness Test, Form A.

Analyses of variance were used to test hypotheses one and two. A correlation coefficient was computed to test hypothesis three. The .05 level of significance was used as the level at which the hypotheses would be rejected.

The results indicated that kindergarten experience significantly affected reading readiness scores. It especially benefitted the girls. However, sex did not appear to be a determining factor for readiness, since when the female non-kindergarteners were compared to the male non-kindergarteners, they were almost exactly equal in reading readiness.

The correlation coefficient found that age and readiness were significantly related for both boys and girls at the .05 level of significance. But the coefficient was relatively small and could not be safely used as the sole determining factor for the placement of students.

When all results were analyzed, the first and third hypotheses were rejected. The second hypothesis was supported by the fact that the two non-kindergarten group means on readiness were almost exactly equal.

The study concluded that kindergarten experience especially was a determining factor in reading readiness. A significant correlation was found between the age and performance on the Metropolitan Readiness Test. However, the coefficient was low and therefore, age alone should not be the only factor used in placement of students. Also concluded from the study was the fact that the variable sex did not affect reading readiness. The findings suggested that girls adapt more readily to school experience, but that the sex of a child did not

have any bearing. This suggestion certainly merits further investigation.

Collins, Susanne S. (Specialist in Education, Guidance and Counseling, August, 1976)

PEER COUNSELING WITH POTENTIAL HIGH SCHOOL DROP-OUTS

This study was designed to determine if peer counseling with freshmen potential drop-outs in high school would have a significant effect on grade point average, study habits and attitudes.

A total of eighty-seven ninth grade students were administered the *Survey of Study Habits and Attitudes.* Forty-two students were below the 50th percentile in almost all areas on the survey. Of these forty-two students, twenty-four students met the criteria set up to identify potential drop-outs. These twenty-four students were divided equally into two groups. The experimental group received peer counseling for twelve weeks and the control group received no counseling.

At the end of a twelve week period, the *t* test was used to find the significant difference in the means of Winter quarter grade point averages of both groups. There was no significant difference.

The experimental group was administered the *Survey of Study Habits and Attitudes* a second time. The *t* test was applied to find the significant difference in the means of the study orientation scores of both groups. It was found that there was a significant difference in study orientation of the experimental group.

It is concluded that peer counseling has little effect on grade point averages in a short period of time. However, peer counseling does improve study habits and attitudes.

Cook, Charles A. (MA, History, August, 1976)

THE OCONEE FRONTIER THE ADVANCE OF GEORGIA TO THE OCONEE RIVER

The purpose of this thesis is to trace the advance of Georgia from the Ogeechee to the Oconee River. A major concern is the process by which the Creek Indians were forced to give up their territory to land hungry settlers advancing against Indians who were determined to hold onto their land. The end result was frontier warfare which resulted in deaths and a deep and abiding hatred on each side. Ultimately the settlers, due to their greater numbers and more advanced

technology, gained control of the land they coveted.

Beyond the struggle for the land itself along an advancing frontier, there was an international situation born of the American Revolution and not fully resolved until the United States asserted itself as a self-reliant nation. It is the object of this thesis to fully explain and expound upon internationall events which played a vital role in Georgia's acquisition of the Creek Oconee Territory. At the close of the American Revolution, the Creeks stood a semi-independent people. Although deserted by their former British allies, Britain, Spain, and the United States served as potential allies to be used by the Creeks. Alexander McGillivray rose to power as the most influential Creek Chief. It was his skill at international diplomacy which maintained a balance between the United States and Spain, thus allowing the Creeks to remain independent. Only after the death of McGillivray was the issue of Georgia's control of the Oconee Territory settled and the Creeks reduced to the status of wards of the United States.

The thesis further deals with the struggle between Georgia and the national government for control of Indian affairs. Georgia under the Articles of Confederation asserted her right to sole control of the Indians within her territory. The end result was the making of three treaties with the Creeks for the Oconee Territory, none of which was recognized by a majority of the Creeks. After the Constitution was adopted, the United States took over Indian relations. The first attempt of the national government to resolve the issue by drafting a treaty for the granting of the Oconee Territory to Georgia also failed. It was only after the death of McGillivray that a final compromise treaty was drafted. Under the Treaty of Coleraine of 1796, not only did the Oconee Territory finally become a permanent part of Georgia, but the Creeks became wards of the United States. This was not the end the struggle of the Creeks to hold on to their territory and autonomy as a people, but it was the beginning of the end.

Cuff, Jelene B. (MA, English, August, 1976)

LILITH AND EVE IN NINETEENTH CENTURY AMERICAN FICTION: MELVILLE AND HAWTHORNE

This thesis is an examination of the ancient ideas and experiences that were the basis of the archetypal dual personifications of woman as Good and woman as Evil in religious and literary myth, folklore, poetry, and prose. The earliest recorded personifications of these extremes, Lilith and Eve, are traced from their conception through western literature. Particular attention is given to the predominance of these figures in the romance genre. The figure of man as Adam is also discussed in its symbolic relationship to these two female figures.

The nature of American literature is then discussed, with special emphasis on the wide use of these three archetypal figures and the Garden of Eden story in our native literature. The focus of the study then narrows to particular American authors and their uses of this device. Finally, two romance-novels, *Pierre or the Ambiguities* by Herman Melville and *The Marble Faun* by Nathaniel Hawthorne are discussed in greater detail, noting specifically the similarities between the two works in their use of these dual archetypal female figures, their symbolic characterizations of Adam, Lilith, and Eve, their comparative themes, and their kindred plots.

Culp, Juanita H. (Specialist in Education, Elementary Education, March, 1976)

A COMPARATIVE STUDY: TWO METHODS OF TEACHING READING—PROGRAMMED READING AND READING SYSTEMS

The study was conducted to determine whether statistically there would be a significant difference in the mean reading achievement if third-grade remedial reading pupils studied in Sullivan Programmed BRL linguistic reading materials or if they studied in Scott Foresman Systems congnitive-linguistic reading materials.

An intact group of twenty-six third-grade pupils who were experiencing reading difficulties were ordered into matched pairs according to similar pretest scores on the California Upper Primary Reading Test, Pretest Form W. One member from each pair was assigned to each of the two experimental groups. Upon termination of the experiment, the posttest of the aforementioned test was administered to the twenty-two pupils remaining in the experiment.

A pretest-posttest randomized blocks research design with the *t* test was used to test the hypotheses. The eight criterion variables for the hypotheses were the scores from each subtest and total test of the California Reading Test. The experiment was conducted during eighty consecutive school days.

The *t* test was applied to analyze the difference between the means on each criterion. At the .05 significance level none of the null hypotheses were rejected.

Curry, James Linton, Jr. (Specialist in Education, Elementary Education, August, 1976)

THE EFFECTS OF TEACHER ENCOURAGEMENT AND EXPECTATIONS ON THE SPELLING TEST SCORES OF SIXTH GRADE STUDENTS

In order to determine the effects of teacher encouragement and expectations on the spelling test scores of sixth grade students, the following study was conducted. The 27 students involved were in the sixth grade at Garden Lakes School in Rome, Georgia. In order to assure statistical soundness, randomization procedures were employed. Fourteen students composed the experimental group. Thirteen students composed the control group.

At the onset of the study, a sixty spelling word pretest was administered. The first twenty words of the pretest were then used as the instructional material for the first week of the study; the second twenty were used the second week; the third twenty were used the third week. The same sixty words were also used as the posttest. Students were not told that they were taking part in a research study.

Weekly "pep talks" served as encouragement to the experimental group. All other conditions were the same for both groups.

Statistical findings indicated that a significant difference occured only when comparing the first week's mean quiz score of the experimental group with the first week's mean quiz score of the control group. Statistical significance was not realized when comparing the second week's mean quiz score and the third week's mean quiz score of the experimental group with the corresponding mean quiz scores of the control group. Likewise, no significant difference was realized when comparing the mean of the gain scores of the pre and posttests for the experimental group with the mean of the gain scores of the pre and posttests for the control group.

It was concluded that the results of this study indicate that teacher encouragement and expectations may sometimes significantly affect the performance of students and at other times may not.

Davenport, Sibyl S. (Specialist in Education, Elementary Education, August, 1976)

HETEROGENEOUS GROUPING VERSUS HOMOGENEOUS GROUPING BY CLASSROOMS IN THE SECOND GRADE AT BUCHANAN ELEMENTARY SCHOOL AND THE EFFECTS OF EACH ON ACHIEVEMENT AND ATTITUDE

This study was designed to compare results of grouping heterogeneously and homogeneously.

Subjects used in this study were all the second grade pupils in Buchanan Elementary School. One third of the pupils were selected with a wide range of abilities (Group 1). The rest were divided into a high group (Group 2) and a low group (Group 3) with less range in abilities. There were eighty-five involved in the study but only seventy-five completed the study. The study lasted approximately seven months.

The *Metropolitan Achievement Tests* and *Animal Crackers* attitude tests were used as pre and posttests. The *Otis Lennon Mental Ability Test* was administered to measure IQ.

The gain score between pre and posttests were used as a measure of the dependent variables: self concept, word knowledge, word analysis, reading, total reading, spelling, mathematics computation, mathematics concepts, mathematics problem solving, total mathematics. Analysis of covariance with IQ as the covariate was used and six of the hypotheses were rejected at the .05 level of significance.

Results of the analysis indicated significant differences on six of the dependent variables with Group 2 scoring significantly higher than Group 1 and Group 3 on word knowledge, mathematics computation, mathematics problem solving, and total mathematics. However, Group 3 scored significantly higher than Groups 1 and 2 on reading. On total reading Group 2 was significantly higher than Group 1 and Group 3 was significantly higher than Group 1.

Davis, Cynthia L. (Specialist in Education, Guidance and Counseling, March, 1976)

PERSONALITY CHARACTERISTICS OF JUNIOR COLLEGE SPECIAL STUDIES STUDENTS

An investigation of the personality characteristics of students enrolled in a junior college Special Studies program was conducted. Special Studies males and females under 21 years of age were compared to control groups of regularly admitted freshmen using the Sixteen Personality Factor Questionnaire. Within the Special Stud-

ies subject group, male and female students under 21 were also compared with students 21 and over.

It was found that young Special Studies males are more outgoing, warmhearted, and participating than regularly admitted freshmen. They tend to be calmer and less easily upset as well as more venturesome, socially bold and uninhibited than other freshmen.

Young Special Studies females are less intelligent and more concrete in their thinking than regularly admitted females. They also appear to be more dependent, over-protected, and sensitive.

Older Special Studies students of both sexes are more trusting, adaptable, and easy to get on with than younger students. It seems that young Special Studies students have a tendency to be more mistrusting and suspicious.

Older males in Special Studies were found to be more humble and conforming than younger males who have a tendency to be assertive, aggressive, and independent. These older men are also not as quick to grasp new ideas and are more literal in their thinking than the younger males.

Older females in Special Studies appear to be more emotionally stable and realistic about life than younger females who tend to be easily upset and affected by feelings.

Garrett, Donald (MA, Psychology, June, 1976)

SELF ACTUALIZATION AND RELIGIOUS EXPERIENCE

121 volunteers from the Miracle Deliverance, the Triumphing Church of the Apostolic Faith were administered the Personal Orientation Inventory. From interviewing, it was found that 20 of those surveyed had been "saved" from one day to one year six months and 101 had been saved more than one year six months. Self-actualization was associated with the salvation experience itself. It was also concluded that the fellowship of the church meetings on the second and fourth weekends only enhanced the self-image, that the salvation experience had already delivered.

Golden, Melvin L. (Specialist in Education, Administration and Supervision, June, 1976)

TEACHER SELECTION CRITERIA FOR CARROLL COUNTY GEORGIA

This study was done as an applied research project to develop a teacher selection process for Carroll County Georgia. With a suffi-

cient supply of teachers available and the complications in the dismissal of teachers caused by the Fair Dismissal Law passed by the 1973 Georgia Legislature, the need for a selection process that will help assure more effective teachers being employed is great.

In developing the process a review of selected literature on teacher selection waas conducted. The questionnaire used by May and Doerge in Louisiana (1972) was adapted for use in this study. That instrument contained most of the items mentioned in other studies and has been validated. The questionnaire was administered to all professional personnel in the Carroll County School System. The professional personnel were divided into four groups; principals and central office personnel, high school teachers, elementary teachers and primary teachers. The mean for each of the 55 items on the questionnaire was calculated and the means were ranked from highest to lowest in each group. The items ranked by the principal and central office group as very important to essential were used as the basis for comparison. The null hypothesis—that there was no significant correlation between the rankings of these items by the principals and central office personnel group and each of the other teacher groups was made. The null hypothesis was rejected in each case. The 23 items ranked as very important to essential by the principals and central office group were used to develop the selection process.

The process of teacher selection recommended as a result of this study has the following steps. An updated application form should be completed and a copy of the applicant's college transcript should be sent to the system office. The superintendent or his designee would review the application and check the list of vacancies given him by the principals. The list of vacancies should include a complete job description. The superintendent or his designee would then conduct the first interview and contact the former associates of the applicant either personally or by telephone. All the information gained by these steps should be recorded on check lists and passed on to the principal. He would review the information and conduct the second interview. The teachers with whom the applicant would be working would conduct the third interview and give the principal a composite rating on the same items that were sought in the other interviews. The principal should then make the recommendation for employment based on all the information gathered. The board of education could then either employ or reject the applicant.

Greear, Mildred (Specialist in Education, Elementary Education, August, 1976)

A HISTORY OF THE SCIENCE FAIR MOVEMENT IN GEOGIA WITH A SURVEY OF ATTITUDES HELD TOWARD SCIENCE FAIRS BY SELECTED FLOYD COUNTY STUDENTS

The first Georgia State Science Fair was held in Atlanta in 1949, with students chiefly from the Atlanta area showing 313 entries. Entries represented the work of students from kindergarten through grade twelve.

The fair has now grown to an organization that attracts 500 entries yearly from students who have won first or second place in certified pre-selection fairs.

Among the agencies assisting the fair to its present status are the Georgia Academy of Science, the Georgia Junior Academy of Science, and the University of Georgia. A number of Georgia industries and businesses have sponsored the fair financially.

Now officially the Georgia Science and Engineering Fair, it has affiliation with the Westinghouse National Science Talent Search and the International Science and Engineering Fair.

Since 1957, the fair has been held at the University of Georgia.

The attitudinal survey accompanying the history polled 270 science fair participants in Cave Spring and Model High Schools in Floyd County, Georgia. Respondents were from the freshman, sophomore and junior classes. The descriptive statistical treatment detailed responses for the sub-groups school, grade, sex, and winning status.

Winners and non-winners gave first goal priority to investigating a problem that had meaning for them, but differed in other priority rankings for goals and for sources of information for science fair projects.

An encouraging finding was that 58 percent of the students agreed that they and their teachers have clearly understood objectives when they enter a science fair.

More than half of the respondents took the strongly agree position that participation in science fairs should be voluntary.

Two items provided for open ended responses and those were appended with other survey data. Also appended were copies of the catalog for the first Georgia State Science Fair and for the first Atlanta Science Congress.

Harman, William S., Jr. (Specialist in Education, Administration and Supervision, June, 1976)

A COMPARISON OF THE LEARNING CLIMATE BETWEEN OPEN AND TRADITIONAL PRIMARY SCHOOLS IN CARROLL COUNTY, GEORGIA

This study was conducted to investigate the following questions: Is there a positive relationship between the design of a building and the attitude of teachers in seven primary schools in Carroll County, Georgia? What effect do the following factors have on teachers' attitudes: Leadership, Freedom, Evaluation, Compliance, and Cooperation. The instrument used in conductting this study was the Learning Climate Inventory developed by John R. Hoyle. The data for this investigation was collected by administering the above mentioned instrument to all of the faculty members of seven primary schools, grades 1-3,. The total population was 80. The findings resulted in no significant difference in a positive relationship between the design of the building and the attitude of teachers. Also, there was no significant difference in the climate factors on teacher attitudes.

Harrell, Ronald L. (Specialist in Education, Secondary Education, August, 1976)

AN EVALUATION OF UNITED STATES HIGH SCHOOL HISTORY TEXTBOOKS IN REFERENCE TO CONFLICTING INTERPRETATIONS OF THE UNITED STATES ENTRY INTO WORLD WAR I, WORLD WAR II, AND THE COLD WAR

The purpose of this study was two-fold. First, it was an examinaion of high school United States history textbooks to determine what historical interpretation was given and if alternative interpretations of history were presented to the student with reference to the United States' entry into World War I, the United States' entry into World War II, and the United States' entry into the Cold War.

The second purpose of this study was to determine if there was any correlation between the date a textbook was published, and whether or not the textbook offered the student alternative interpretations of history.

After the study was completed, the following conclusions were reached:

1. In the period between 1962-1972, it was found that high school United States history textbooks have changed very little in the approaches to the material presented.

2. Traditional interpretations are given in reference to the United States' entry into World War I, World War II, and the Cold War.

3. The textbooks do not give the student information on alternative historical interpretations in existence.

4. Textbook authors seem to be hampered by feelings of nationalism and emotionalism in their writings. The result is that the student gets only one view of historical events.

5. Textbooks are written as if history were an objective subject. But the failure to make the student aware that conflicting interpretations do exist makes the textbook essentially biased.

Hatfield, Archie E., Jr. (Specialist in Education, Guidance and Counseling, March, 1976)

NONVERBAL COMMUNICATION OF CLIENTS AND THE AUDIBLE COUNSELING SETTING

The counselor in his office has the freedom to modify his environment as he deems necessary. As could be expected, the counselor usually tries to create a favorable psychological atmosphere for the client. The researcher, by observation of client behaviors and direct questions, discovered that clients were less responsive and more anxious in direct conjunction with the volume and frequency of external sound. Having recognized the problem, attempts were made within the local school system to soundproof, baffle or otherwise restrict noises in the counseling area. The use of radio programs was attempted but abandoned when moods and changes in client disposition were noted to often correspond with music, news, or commercial messages.

The necessary medium was one of a neutral nature, pleasant but not subject to overtones of a psychological nature. An inexpensive "White Sound" generator was purchased and operated during counselor client sessions. The effected sound approached realistically the steady roll of waves, of moderate size, upon a sandy beach. The resulting effect on clients previously scheduled were immediate and promising.

The population for this study was the entire tenth grade class of Hardaway High School with the exception of forty three students, this created a derived N of 384. A control experimental group was created by split half method. Both groups approached the overall mean in racial make up, sex, age, IQ and achievement.

The clients nonverbal behavior, those utilized in the study deemed to be most objectively observable, were recorded by the researcher in each case. Only the first occurence was measured in order

to allow for individual differences and self reinforcing behaviors. A simplified modification of Kinesic shorthand was utilized and clients seemed unaware of the notation. All other conditions, as could be controlled through time, were normal and contamination minimal. The season of the year was spring and air conditioning was functional. The office in question has no windows and only one door which was closed during the experimental time period.

The resulting information supported the hypothesis that the direct variable, the presence of white sound, caruse an approximate 20% difference in the frequency of certain nonverbal behaviors. Most significant was the distance chosen by clients to sit in relation to the sound and the counselor. Thye hypothesis that there is a specific relationship between the presence of a specific white sound and certain selected nonverbal behaviors of the population in question seems to be indicated.

Other areas of investigation which may prove fruitful and might be implied from this study were: eye contact and racially mixed counseling sessions, the relative importance of seating within the counseling office, the nonverbal behavior of juveniles in secondary schools before and after lunch, reduction of anxiety through use of nonverbal behavior in sound controlled environments, or what are the implications of the nonverbal behavior observed with regard to the counseling process. This latter promises to be a highly complex but most likely the most beneficial avenue of research.

Hochman, Neil (MA, Psychology, March, 1976)

EMG FEEDBACK AND RELAXATION TRAINING AS AN ANCILLARY TREATMENT FOR ELEVATED INTRAOCULAR PRESSURE

The self-regulation of intraocular pressure (IOP) through EMG feedback training was explored. Eight subjects were obtained: Two were diagnosed as open angle glaucoma and the remaining six as ocular hypertensives. Both glaucoma patients and three of the ocular hypertensives were receiving ophthalmic medication. In addition, nine control subjects that matched the experimental subjects in terms of IOP, clinical diagnosis, and approximate age were selected. The experimental subjects reported to an ophthalmoligist's office where the biofeedback sessions were conducted twice a week for eight weeks. A program of taped relaxation instruction (a series of three audio cassettes) was utilized. The control group received no treatment. Ocular pressures were measured on a pre- and post- basis using a Goldman applanation tonometer.

An analysis of covariance indicated that there were no significant differences between the two groups. Although this is a sensitive test of differences between treatments, its power is profoundly limited by sample size.

At the last training session, the experimental subjects were also measured on a pre- and post- basis during the session. A repeated measures analysis of variance showed a significant reduction of IOP for both the right eyes (p037) and left eyes (pp001). Considering these results, and the fact that the pressure decreases in the experimental group (after eight weeks) were of such magnitude as to be clinically important, it would be premature to reject this technique without replication using a larger sample.

The significance of this work lies in the possible use of this approach as a treatment ancillary to those already used for ocular hypertension or open angle glaucoma.

Holland, David A. (Specialist in Education, Administration and Supervision, March, 1976)

THE ROLE OF THE SECONDARY SCHOOL DEPARTMENT HEAD IN GEORGIA

Supervision of curriculum and instruction has, for many years, been considered one of the chief responsibilities of the secondary school principal. The task of supervising curriculm and instruction is too great for the principal to perform alone. It is; therefore, appropriate for someone to be selected to help him perform these important tasks. Many principals have selected a person in each of their subject matter areas to help them and called them department heads.

Five aspects of the department headship were researched in both the literature and in the state of Georgia, as perceived by secondary school principals. These five aspects were: (1) selecting the department head; (2) training the department head; (3) duties and responsibilities; (4) monetary reward for the department head; and (5) released time for the department head. The literature was almost completely void of information concerning department heads in small and Georgia schools. A survey instrument was mailed to all secondary school principals whose names appeared in the 1975 edition of the *Georgia School Directory*. Over 58 per cent of the principals responded without a follow-up reminder.

Over 83 per cent of respondents' schools were organized by departments and 97 per cent indicated that, if they were organizing a new school, they would use departmental organization. Most Georgia department heads are not supported in the five aspects mentioned

sufficiently for them to perform effectively and; therefore, remove the responsibility for supervising curriculum and instruction from the principal.

Accrediting agencies have required that the principal spend 50 per cent of his time supervising curriculum and instruction. Because this is an almost impossible task it is recommended that accrediting agencies develop criteria that require department heads to be responsible for curriculum and instruction supervision. It is further recommended that the department head be selected by the principal after he recieves input from department members; that he be given responsibility for curriculum and instruction supervision and the authority to make him effective; that he be released for 1 period, in addition to planning time allowed other teachers, for the first 3 to 5 department members and a second period for 6 or more department members; that the State Department of Education and colleges of education consider training programs for department heads; and that the department head be compensated a yearly salary that is indicated, at the local school level, by economic conditions.

The Georgia department headship is dominated by the white female. Black males are almost completely absent from the department headship with black females occupying the headship only slightly more often than the black male.

Houston, Louise B. (Specialist in Education, Guidance and Counseling, March, 1976)

SELF-CONCEPT VS. ACADEMIC ACHIEVEMENT IN THE INTERMEDIATE GRADES OF ELEMENTARY SCHOOL CHILDREN

The purpose of this study was two fold: one, to compare the academic achievement of the child with low self-concept with the academic achievement of the child with high self-concept; and two, to compare the aggressive behavior as observed by the teacher of the child with low self-concept and the child with high self-concept.

The subjects of this study were selected children from the fourth, fifth, and sixth grades of North Jonesboro Elementary School, Clayton County, Georgia. These children ranked above or below one standard deviation of the mean on the *Piers-Harris Children's Self-Concept Scale.*

Standardized achievement tests and itelligence tests were administered to all the children of the two groups. Teachers made observations on an informal survey at the end of the first two weeks of the academic school year of aggressive behaviors of the students.

A comparison of the academic achievement of the students who rated themselves with high and low self-concept as measured by the Piers-Harris Scale was made by applying the Mann-Whitney U Test. The results of the study indicated that the composite scores in the areas of spelling, reading, and arithmetic showed no significant difference at the .05 level ($z = \pm -1.96$).

Aggressive behaviors as observed by the teachers were not significantly different in children with high or low self-concept.

Hudgins, Oliver G.(Specialist in Education, Administration and Supervision, March, 1976)

THE STATUS OF COLLECTIVE NEGOTIATIONS BETWEEN SCHOOL BOARDS AND THEIR EMPLOYEES

The concept of collective negotiations between district school boards and their professional employees has become a serious concern of many board members and school administrators throughout the nation. The purpose of this study was threefold. First was a determination of the status of state and federal legislation relating to collectice negotiation between professional educational personnel and their employers. Secondly, was an investigation of the status of negotiations between school boards and the certificated school personnel in Georgia. And thirdly, was the identification of some guidelines which school boards might consider when preparing for collective bargaining.

The information and data necessary to the development of this study was obtained through the synthesis of the literature on this topic. An analysis of existing state statutes and pending federal legislation was critical to the development of this research project. The information obtained from various court decisons and attorney general's opinions was important in determining the status of collective negotiations for public employees in Georgia.

This study has shown that two distinct situations relating to collective bargaining for public employees exist within the United States. About seventy-five per cent of the states have legal precedent either mandating or permitting school boards to negotiate with their employees. Thirty-one states have authorized negotiations by the enactment of collective bargaining legislation. The school boards in twenty-five per cent of the states have no statutory obligation to negotiate with their employees. Even so, negotiations have occurred in some of these states and written contracts executed.

This study has shown that the statutory laws of Georgia are silent on the subject of negotiations between public employers and

their employees. However, it was concluded that school boards, if they so desired, could meet their employees and negotiate concerning the terms and conditions of employment. School boards cannot be forced into negotiations, nor can they enter into a binding contract with a third party in the absence of legislation.

Before entering negotiations, school boards must address themselves to two critical problem areas. The selection of a chief negotiator is crucial to successful bargaining. It was concluded that some in-house administrator should be selected to serve as chief negotiator. This person would already have an intimate knowledge of the school system he is representing. The second problem area is the preparations of the management team for actual bargaining. The board should insist that the negotiating team be supplied with all the essential data and information required for successful negotiations.

Ison, Tommy J. (Specialist in Education, Administration and Supervision, August, 1976)

ATTITUDES OF ELEMENTARY PERSONNEL IN THE GRIFFIN-SPALDING SCHOOL SYSTEM TOWARD USING STATEWIDE ASSESSMENT PROGRAMS AS A MEANS OF DETERMINING EDUCATIONAL ACCOUNTABILITY

This study was undertaken to present the attitudes of elementary classroom personnel in the Griffin-Spalding School System toward their professional commitment to the educational system and to determine their attitudes about using statewide evaluation programs as a means of determining educational accountability. An educational opinionnaire was designed and pilot tested on a group of graduate students attending off campus classes offered by the Department of Education at West Georgia College. The opinionnaire instrument yielded a coefficient alpha reliability of .70. Following the pilot testing, the opinionnaire instrument was distributed to 293 elementary school personnel in the Griffin-Spalding School System and 61% of the total opinionnaires distributed were returned. From the tabulation and analytical treatment of the data it was concluded that elementary personnel in this particular school system displayed strong negative attitudes about using statewide test results to determine educational accountability. It was also concluded that the elementary school personnel generally held positive attitudes about their overall commitment to the educational system, and that they displayed positive attitudes about the educational system in Griffin-Spalding with two notable exceptions. These exceptions were teacher

attitudes about the adequacy of present school facilities and teacher attitudes about the operational procedures of the local board of education.

Jackson, John Calvin (Specialist in Education, Secondary Education, August, 1976)

A STUDY OF THE EFFECT OF TEAM TEACHING UPON ACHIEVEMENT IN AND ATTITUDE TOWARD UNITED STATES HISTORY AMONG STUDENTS AT CHEROKEE HIGH SCHOOL

This study attempted to determine if the use of an interdisciplinary team teaching approach would result in a significant gain in achievement or in attitude when compared to a traditional one-teacher approach. The experimental group consisted of two intact classes which were taught by a team of two teachers and were also part of a larger English-United States history class taught by four teachers. The control group consisted of two intact classes taught by one teacher in a traditional classroom. Null hypothesis were used.

Both groups were given form A of the *Cooperative Social Studies Tests: American History* as an achievement pretest and form A of *Remmers Any School Subject Survey* as an attitude pretest. Form Am of the *Otis Quick-Scoring Mental Ability Gamma Test* was given to determine if the two groups were of equal mental ability. The t-tests for the difference between means were computed and no significant differences were found in either mental ability or achievement. However, the control group was significantly higher at the .05 level on the attitude survey.

The experimental period lasted for seven school months. At the end of the treatment form B of the *Cooperative Social Studies Tests: American History* and form B of the *Remmers Any School Subject Survey* were given as posttests. Mean gains in achievement and attitude, as demonstrated by scores on the pretests and the posttests, were calculated. The t-test for independent samples found no significant difference in achievement gains at the .05 level. Hypothesis one was accepted. A significant difference in the attitude gains, at the .01 level, was found to favor the experimental group. It was concluded, therefore, that the team teaching approach may produce a more favorable attitude toward subject matter than the traditional approach. Hypothesis two was rejected.

Jenkins, James T. (Specialist in Education, Administration and Supervison, August, 1976)

THE DEVELOPMENT OF A TEACHER EVALUATION INSTRUMENT BY THE DISCRIMINANT PERCEPTION REPERTORY TEST METHOD

The purpose of this project was to develop a teacher evaluation instrument designed to help school administrators and teachers in the improvement of instruction. The construction of the instrument involved a cooperative effort between teachers and those designed as evaluators. The input of the teachers as to the areas of evaluation was considered to be important in the construction of the instrument.

The project effort involved receiving input from 38 classroom teachers, relative to the areas they felt strongest about on teacher performance. The teachers listed factors which they felt made a teacher either an effective teacher, or characteristics which contributed to being ineffective. Alan F. Brown's Discriminant Perception Repertory Test was the method used to gather the information for the construction of the instrument.

The project was effective in producing significant areas that teachers felt were important to effectiveness in the classroom. Teacher involvement in the construction of the instrument helped to break down several of the previous communications barriers connected with evaluation.

Jones, Betty J. (Specialist in Education, Guidance and Counseling, June, 1976)

MODIFYING AGGRESSIVE BEHAVIOR OF ELEMENTARY STUDENTS BY THE USE OF BEHAVIORAL SELF CONTROL TECHNIQUES

This research examined the effectiveness of a behavioral self control program on the reduction of aggressive primary grade children. One experimenter, the Counselor at Mountain View Elementary School, Mountain View, Ga. established a base rate for three specific aggressive behaviors during a two week period prior to beginning the training program. The conditioning phase, during which the program was administered, lasted for five weeks. After that time, the program was discontinued. Approximately three weeks later, the experimenter again observed in the classroom to determine if the behavior rates had increased or decreased after the treatment had been terminated. The data was analyzed by use of Wilcoxon Matched Pairs Signed

Ranks Test. Analyzed difference between pretraining period and training periods represented by the first week, second week, third week, fourth week, and fifth week produced significant results at or beyond the .05 level.

Long, Deborah H. (MA, English, March, 1976)

THREE RECURRING THEMES IN THE WORKS OF JAMES DICKEY

The poetry and prose of James Dickey covers a wide range of subject matter, but the largest part of this writing deals with a few prominent themes: death and rebirth, initiation, and man's moral dilemma. This thesis attempts such a thematic analysis of Dickey's poetry and his one novel, *Deliverance.*

The theme of death and rebirth transcends historical boundaries, and Dickey, always aware of the problems the individual faces in a modern society, relates this theme to the needs of the individual in a contemporary world. Spiritual regeneration in Dickey's poems relies on the power of the imagination to transcend the rational world. Consequently, renewal may occur in almost any experience, the poet implies, but the natural world offers the most promise for such an experience. Dickey's persona most often witnesses the recurring cycle of life, death, and resurrection in nature.

In the theme of initiation, too, Dickey is able to stress the transforming capacity the imagination holds for the sensitive man. The *rite de passage* in Dickey's works almost always involves some traumatic and terrifying experience in which the initiate is forced to exceed his own limitations. In the course of the adventure the initiate gains an unusual view of man in general and himself in particular; he usually discovers within himself the primitive and savage nature that lies hidden within all men. Ritualistic elements found in the poems and in *Deliverence* serve to point out the importance of the experience to primitive and modern man alike.

The poet also explores such traditional subjects as war, family, love, and many forms of human relationships and finds the human condition wrought with serious and complex predicaments. The theme of man's moral dilemma is considered in poems which depict the complex human emotion of guilt, futility, and fear. These emotions are often irrational and consequently cannot always be alleviated by imaginative visions, such as those found in poems dealing with death and rebirth and initiation. Nevertheless, the imagination is always at work in whatever Dickey writes and lends a type of consistency to his works.

Lovvorn, Demmervel S. (Specialist in Education, Guidance and Counseling, June, 1976)

INTERPERSONAL ADJUSTMENT AND CAREER DEVELOPMENT OF HIGH SCHOOL STUDENTS THROUGH GROUP COUNSELING

This study sought to determine the short-term effect of group and individual guidance and counseling in career development using four groups of students. The Piers-Harris Self Concept Scale was used as a pre-test and post-test to determine, with t test, the difference between the means of the treatment groups at the critical value of .05. Significant differences were found between the treatment groups. Positive results were found for those treated experimentally with guidance activities. Students had more information about opportunities in different vocations, attitudes and behavior improved, personal satisfaction in school activities increased, and the guidance program services were expanded through the career development group counseling activity.

Lumsden, Carolyn F. (MA, English, August, 1976)

THE FUNCTION OF REGIONAL FOLKLORE AND TRADITON IN THREE OF THOMAS HARDY'S WESSEX NOVELS

In the Wessex novels of Thomas Hardy, the incorporation of folklore and tradition from his native county of Dorset is a substantial contribution. The purpose of this study was to examine Hardy's use of the folktales and traditions and to determine their function in three of those novels. The endeavor to fully appreciate the contribution included a study of the origins of the folkways and stories, an investigation into Hardy's own assimilation of the traditions, an exploration of the use of the material in each novel, and a thoughtful attempt to explain how the folklore and traditions distinguish Hardy's works.

In order to establish the origins of the Dorset County legends and folkways which are the bases of their Wessex counterparts, a study was done of the myths and customs of that region in England. Out of the many excellent British studies of folklore and tradition were chosen the ones whose descriptions of the folkways most accurately corresponded with the ones in Hardy's works in detail and geographical origin. A thorough study of biographies, letters, and notebooks of Hardy's revealed the gradual assimilation of the folk material he used. More importantly, it revealed the importance that Hardy attached to his folk hertiage. The novels considered in this study were

The Return of the Native, The Mayor of Casterbridge, and *Tess of the D'Urbervilles,* and they provided the most vital material. The many uses of tradition and folklore were examined in the context of the novels. Hardy's own descriptions of the traditions and folklore provided the best source of information about the Dorset County culture which he emulated.

The research revealed that there were three major contributions made to the Wessex novels through Hardy's use of folklore and tradition. The most apparent one was the use Hardy made of unusual stories or customs to create a tone of mystery or foreboding. Secondly, Hardy used traditions and folklore to foreshadow more important events in the novels which contribute to the pathos. The least obvious use was Hardy's integration of the folk material into characterizatons in order to dramatize unusual attributes. The conclusion of this study was that the contributions made by the folk material in achieving a mysterious tone, in foreshadowing major events, and in characterization distinguish the novels as great works and contribute to their univerality.

Mayben, James H. (Specialist in Education, Administration and Supervision, August, 1976).

A STUDY OF THE CHARACTERISTICS OF STUDENTS WITH BEHAVIOR PROBLEMS IN PUBLIC SCHOOLS WITH THE PURPOSE OF ESTABLISHING COUNTY-WIDE POLICIES WITH AIM OF REDUCING DISCIPLINE PROBLEMS

The study was conducted to determine whether students with discipline problems could be identified and if so what characteristics they exhibited. This study surveyed teachers in grades four, and eight in Polk School District, Cedertown, Georgia. Students were separated into two different categories. One category was for students who were considered to be discipline problems, while the other category was for students who were termed good students.

The teachers identified one hundred discipline problem students and one hundred eighty-seven good students. After the lists had been compiled, the students were administered (1) Feelings About School instrument and (2) Index of Adjustment and Values instrument.

These two instruments and the students' permanent record cards were used to help determine what characteristics students with behavior problems exhibited.

The instrument on Adjustment and Values did not appear to provide the type data needed to discriminate between good students and those students with discipline problems. The instrument on Feel-

ings About School appears to provide the type data needed to discriminate between good students and those students with discipline problems.

McClure, Charles D. (Specialist in Education, Elementary Education, March, 1976)

THE EFFECTS OF SELECTED MANIPULATIVE MATERIALS ON THE LEVEL OF MOTIVATION TO ACHIEVE OF FIRST GRADE CHILDREN

The study was undertaken to determine the potential of selected manipulative materials for changing the level of motivation to achieve of first grade students. All students involved in the study were from two different urban schools within Fulton County, Georgia. Students from one school became the experimental group and were exposed to the selected manipulative materials. Students from the other school had no such exposure.

The pretest and posttest for both groups was *Animal Crackers: A Test of Motivation to Achieve.* A statistical comparison of the mean gain scores of the experimental and control groups in each of the six areas of *Animal Crackers* was made. No significant gain favoring either group was found for school enjoyment, self-confidence, purposiveness, instrumental activity, or self-evaluation; however, the gain for the experimental oroup in total motivation to achieve was significant at the .05 level. Findings indicate that the total impact of the inclusion of selected manipulative materials can be beneficial in the first grade as a means of increasing achievement motivation.

McCrory, Bobbie D.F. (Specialist in Education, Guidance and Counseling, August, 1976)

A CASE STUDY OF THE IMPACT OF A MATRIARCHAL FAMILY UPON THE EMOTIONAL LIVES OF FOUR GENERATIONS

The objective of this research paper is to deal with the issue of the emotional effects of a matriarchal family upon four generations and the perspective of dealing with the problems so all members can live successful and contributing lives for themselves and society.

I shall present, compare, and contrast the types of family patterns that exist and the characteristics of each including problems which they present. Also a historical background will be given to show how the family structure and problems evolved.

The underlying premise of this paper is to demonstrate the importance of dealing with the matriarchal family and its affects upon human beings, presenting a case study that contains the matriarchal family and its problems, and the data secured from working with the family.

Chapter one deals with general information.

Chapter two deals with related literature.

Chapter three deals with the case study.

Chapter four deals with the findings and interpretations of data.

Chapter five deals with the summary, conclusions, and recommendations.

McMillian, John W. (Specialist in Education, Administration and Supervision, August, 1976)

DEVELOPMENT OF A DECISION-MAKING MODEL APPROPRIATE FOR USE BY SCHOOL ADMINISTRATORS IN MAKING NONPROGRAMED DECISIONS

Although much attention has been given to decision-making techniques in the business world, little effort has been made in providing decision-making models appropriate to the use of the school administrator. The central problem of this study, therefore, was the development of a decision-making model for educational administrators that could be applied to current nonprogrammed decision areas within public education.

The model developed in this study consisted of four major phases. These phases were combined in an order which was logical when extracted from the work of the authors researched for this paper. The model was developed specifically by combining the four basic phases of decision-making recommended by Stufflebeam, et. al. (1971), with those decision-making principles attributed to March and Simon (1958), and Simon (1965). These decision-making principles were further combined with those planning principles recommended by Hellreigel and Slocum (1974).

The developed model was applied to the solution of two problem areas at Central High School, Newnan, Georgia. These problems concerned developing school identity and spirit, and solving curriculum articulation problems in the area of business education and home economics.

The basic value derived from the model developed in this study was that it provided a systematic approach to nonprogrammed decision-making situations. By guiding the administrator into the identification, evaluation, and selection of alternatives the model

served as a rational vehicle to overcome the tendency to make important educational decisions based only on an administrator's intuition or experiences, unstructured guesses, or other arbitrary choices of any type.

Miller, Burt R., III (Specialist in Education, Administration and Supervision, August, 1976)

A COMPARISON OF PARENTAL ATTITUDES ABOUT GRADE REPORTING PROCEDURES IN TWO COWETA COUNTY ELEMENTARY SCHOOLS

This study was designed to compare the attitudes of two elementary school parent populations concerning the grade reporting procedures employed by the respective schools. The Atkinson School (235 family units) used the traditional report card with evaluative terms A, B, C, D and F; while the Elm Street School (345 family units) used a skill oriented progress report with evaluative terms "S" (Satisfactory) and "N" (Needs Improvement). Parents were asked to respond to fifteen survey statements which covered four basic grade reporting areas: Reporting format, evaluative terms, student classwork forwarded home, and parent-teacher conferences. Elm Street School received a 71 percent return from parents, while Atkinson School received a 51 percent return. Generalizations about the total parent population of Atkinson School were not possible due to the low survey return from the Atkinson parents. Analysis of the survey data resulted in an F ratio of 1.697 indicating that there was no significant difference in parent attitudes about grade reporting between the two schools on the total survey.

Morgan, Frank (MA, Psychology, June, 1976)

PARANORMAL HEALING BEGINNING A THEORETICAL BRIDGE FROM PHENOMENA TO STRUCTURED UNDERSTANDING

The focus of interest in this study was the phenomena of paranormal healing, both through the laying on of hands and absent healing. The experimental results of various researches in paranormal healing, and parapsychology generally, were examined. A comparative analysis of another leading theory of paranormal healing, that of Lawrence Le Shan was made in light of the full range of data. The facts were

considered in an effort to move toward a cogent theory of paranormal healing.

Morgan, Harriet M. (Specialist in Education, Administration and Supervision, June, 1976)

THE DOUGLAS COUNTY POLICY REFERENCE MANUAL

In order for boards of education to provide for efficient and effective management and operation of schools, they must have a structural base upon which to make decisions. The Douglas County Board of Education through a project director, assessed its structural base by updating, codifying, editing and rewriting policies where needed. All policies were based upon current constitutional, statutory and State Board of Education regulations.

The procedures used in this study were: (1) review of 1972-1976 Board documents; (2) identification of policy areas where conflicts existed and areas where no policies existed; and (3) editing, writing and codifying Board documents according to the codification system of the Georgia School Boards Association; and (4) final approval by the Board resulted in an updated Douglas County Policy Reference Manual. Recommendations for continued revision of the Manual were also included in this study.

Mueller, Manfred (MA, Psychology, August, 1976)

IN SEARCH OF THE LOST CHORD: A STUDY OF GEMEINSCHAFTSGEFUHL IN HUMANISTIC PSYCHOLOGY

This paper makes a plea for the oneness of all beings and the existence of a common meaning which ties individsals together. Man is condemned to belong. The feeling of belonging as a basic life energy is viewed as a fundamental aspect of all experience. The situation of an individual as a growing human being is conceptualized as the continuing change in *how* one's belonging is perceived. An investigation of the influences of Alfred Adler, one of the first psychologists to emphasize the social embeddedness of man. His concept of *Gemeinschaftsgefuhl* may indeed be the foundation of Third Force psychology. The thesis concludes with a portrait of the communion of man as the responsible subject of his existence.

Nettles, Henry S., Jr. (Specialist in Education, Administration and Supervision, June, 1976)

A COMPARISON OF THE LEARNING CLIMATE OF TRADITIONAL AND OPEN SPACE MIDDLE SCHOOLS WITHIN COBB COUNTY, GEORGIA

The purpose of this study was to investigate the learning climates of three traditional middle schools and three open-space middle schools within the Cobb County School System. Also, an attempt was made to determine the factors that caused a more positive learning climate. Field data were gathered from 248 teachers using the Learning Climate Inventory and three items of personal information. There were 125 responses from traditional middle school teachers and 123 responses from open-space middle school teachers. The responses were analyzed by a one-way analysis of variance.

There were three major findings with this study. There was a significent difference found between the learning climates of the open-space middle schools and the traditional middle schools. There was a significant difference found in regard to the leadership behaviors of the administration, the freedom the teachers feel to experiment with their instructional activities, and in regard to the extent the teachers and students are involved in teacher and administration evaluations. There was not a significant difference found in regard to the extent teachers are supported in their efforts to team teach and use resources people.

The nature and environment of the open-space middle schools tend to lend themselves to a more open learning climate. The teachers are in a situation whereby they must team teach, therefore, requiring more direct supervision from the administrators. This appears to cause a more open climate for freedom and evaluation for the teachers and administrators.

The teachers in the traditional middle school appear to have more support from the administration. This may be due to the necessity of encouragement by the administration for team teaching to be implemented in the traditional middle schools.

There appears to be a factor of the certificate level of a faculty contributing to the more positive learning climate, whereas, the age of the faculty and the teaching experience do not appear to contribute to a positive learning climate.

The major recommendations to be made are for more assistance at the system level with the staff development programs to help develop the faculties of the traditional schools with the middle school programs. There should not be any future conversions of traditional

junior high schools to middle schools without attention being given to developing the teacher for the transition.

Neville, Mary A.T. (MA, Biology, March, 1976)

AN ECOLOGICAL STUDY OF THE MOSSES OF KENNESAW MOUNTAIN NATIONAL BATTLEFIELD PARK

This study lists 78 species of mosses representing 28 families found in Kennesaw Mountain National Battlefield Park. The moss flora is described in relation to habitat, frequently of occurrence and fruiting season.

Potter, John R. (MA, Psychology, March, 1976)

AN ADVENTURE IN CONSCIOUSNESS: THE GROWTH OF EXPERIENCING

The purpose of this study was to explore the ontology, epistemology, and structural dimesions of conscious experiencing. Ontological consciousness and objective consciousness were juxtaposed and the consequences of each was demonstrated. Objective consciousness was found to be descriptive of a plit condition that denies the wholeness of being disclosed by ontological consciousness. The growth of experiencing is a move toward wholeness; it is a move away from fixed constructs to perception founded on phenomenological fluidity. The consequent epistemology of self/other from onotological an objective perspectives is discussed. Objective knowing is seen to act upon the environment and affect the reality oserved. Hence, an undisturbed percentage of reality is unavailable from this perspective. An experiential-phenomenological knowing that grows out of an ontological grounding is considered to be a process of undoing the fixation of distinctions that create boundaries, realities and letting experience in. Inside/outside, self/other are found to be the same in some way and it is by looking inward to the depths of being (feeling, intuitive, and sensual modes) that a perception of wholeness is possible. A perception of what is flows in when ego constructions are emptied. The growth of experiencing is found to be a move toward wholeness of being and the movement from alienated to wwole knowing. The structural dimensions of consciousness are one's embeddedness in time, space, body, and the psyche in which one's quest for the latter-day Grail, growth, is situated. The movement from objective consciousness to experiential-phenomenological consciousness is found to be a disjunctive jump upon which other crossings, linear or disjunctive, may be made.

Puckett, Christine D. (Specialist in Education, Elementary Education, August, 1976)

AN ASSESSMENT TO DETERMINE THE EFFECTIVENESS OF PROJECT SUCCESS ON CLASSROOM BEHAVIOR IN THE RURAL SETTING OF A FLOYD COUNTY SCHOOL

This study was designed to provide experimental data on the effectiveness of Project Success in lowering the number of discipline cases handled through the school office, thereby showing an overall decrease in negative type discipline handled throughout the school. Records were kept for two years of discipline cases handled in the principal's office, and then the chi square statistical test was incorporated to test for significance in the drop of discipline cases handled for the second year. The .05 significance level was chosen for the comparison. The records were compared in total and in the six discipline areas of (1) student conferences and warnings (2) parent conferences (3) paddlings (4) written assignments (5) suspensions, and (6) other. A significant difference was determined in every area except parent conferences which also showed a drop for the second year, although not a significant one.

Puckett, Robert J. (Specialist in Education, Administration and Supervision, June, 1976)

IDENTIFYING CRITICAL NEEDS OF FLOYD COUNTY SCHOOL STUDENTS THROUGH A COMPREHENSIVE NEEDS ASSESSMENT

This project was undertaken in an effort to provide a basis to make decisions concerning the educational programs of the Floyd County School System. The objective of this project was to enable Floyd County personnel to acquire the understandings, skills, and attitudes needed to implement selected educational improvement activities and practices directed at priority student needs. The problem was to rank identified student needs and develop strategies to meet these needs.

A needs assessment survey was conducted under the auspices of the Staff Development Planning Committee. The organization of the survey originated through the Curriculum Coordination Council. The individual schools in the county set up a local Needs Assessment Committee within their schools and community to coordinate the survey. This committee consisted of teachers, administrators, parents, lay persons, and students. A sample of the school population

was selected and the survey instruments were distributed to parents, teachers, and students and returned through the mail. At the completion of the survey, the Staff Developing Planning Committee met to re-evaluate the needs and goals and presented them to the Floyd County Board of Education.

There were 1,000 survey instruments administered with a return of 641 instruments. The results indicated a need for an in-service staff development program for teachers to strengthen the areas of basic mathematics skills and language arts skills in grades K-12. This was the second ranked goal in the Floyd County School System.

The study might be repeated at least every two years for the next four to six years to provide longitudinal data relative to student needs. The program might be expanded to analyze needs by the subpopulation in order to determine which needs are most critical to each subgroup tested. Also, the in-service staff development program could be continued in order to meet these identified needs.

Pulliam, Timothy N. (Specialist in Education, Administration and Supervision, August, 1976)

THE SELECTION OF ELEMENTARY TEACHERS (1-6) IN THE HENRY COUNTY, GEORGIA PUBLIC SCHOOL SYSTEM AS DETERMINED BY PERSONALITY CHARACTERISTICS

The problem for this research project was to develop an elementary teacher selection procedure for Henry County based on the personality data obtained for the elementary teachers who were tested and based on the theoretical information obtained from the review of the literature. An additional aspect of the problem involved the development of an interview guide for elementary principals to use in the teacher selection process.

All elementary teachers in Henry County were asked to participate in this study. A total sample of 107 teachers were administered four personality tests: the Gordon Personal Profile, the Gordon Personal Inventory, the Survey of Personal Values, and the Survey of Interpersonal Values. The results of these tests were correlated with each other and with other variables such as the age of the teacher and length of service in Henry County. The relationship between length of service and certain personality characteristics was used in the development of an interview guide for use by principals in the selection of prospective teachers for the school system.

Rahman, Kalim Ur (MA, Psychology, June, 1976)

HUMAN MOTIVATION: A CRITIQUE OF AMINALCENRISM

In my study of human notivation in contemporary psychology, I constantly felt concerned about human beings being treated at the level of either animals or automatons. In this paper I have tried to argue against this approach. My thesis is that human motivation is essentially different from animal motivation and that while animal behavior is instinctive and stereotyped, human behavior is infinitely varied and complex. Also I have tried to bring out what is uniquely human—the aspect of meaning, significance and intentionality. The higher needs of human beings as opposed to the merely physiological and instinctive needs of the lower animals are discussed in detail here to form a more holistic and humanistic approach to human motivation.

Ratledge, Patricia M. (Specialist in Education, Guidance and Counseling, August, 1976)

A DIAGOSTIC STUDY OF EMPLOYABILITY SKILLS OF EDUCABLE MENTALLY RETARDED STUDENTS

The purpose of this study was to assess the knowledge of employability skills of the Educable Mentally Retarded pupil in three selected Gwinnett County Schools. The Wechsler Intellegence Scale for Children and the Social and Pre-vocational Information Battery were administered to measure the employability levels of those participating in the study.

Pre-test data collected from the participating students indicated a certain lack of information in the areas of Job Search Skills and Job Related Behavior. After reviewing the pre-test data with participating EMR class instructors, individualized career development programs, the post-test data revealed an increase in the deficient areas pevously identified by the SPIB pre-test scores.

Results from this study, even though a limited sample, clearly suggest that certain standardized tests can be useful in assisting EMR class teachers in planning more meaningful career development programs for their pupils.

Rawlston, Barbara H. (Specialist in Education, Early Childhood Education, August, 1976)

THE STUDY OF STUDENT EVALUATIONS OF THE EARLY CHILDHOOD EDUCATION GRADUATE PROGRAM AT WEST GEORGIA COLLEGE FROM JANUARY, 1973 THROUGH JUNE, 1976

The purpose of this study was to formally tabulate and assess student evaluations of the early childhood education graduate program at West Georgia College from January, 1973 through June, 1976.

One hundred questionnaire results were tabulated. The results showed that the students had positive attitudes toward the early childhood education graduate program at West Georgia College.

Remillard, Donald J. (Specialist in Education, Guidance and Counseling, August, 1976)

STUDY OF THE RELATIONSHIP BETWEEN SATISFACTION WITH SCHOOL AND ACHIEVEMENT OF ELEVENTH GRADE STUDENTS AT LITHIA SPRINGS COMPREHENSIVE HIGH SCHOOL

Satisfaction with school was assessed from the 256 students enrolled in eleventh grade English classes at Lithia Springs Comprehensive High School in Lithia Springs, Georgia by means of a 60-item questionnaire. Those students who scored in the top and bottom twenty-five per cent, selected separately by sex, were designated as satisfied (36 boys, 28 girls) and dissatisfied (36 boys, 28 girls), respectively. Satisfaction with school for the extreme groups was then related to measures of intellectual ability, academic success and ratings given by both English and vocational or fine arts teachers. There was no significant relationship between satisfaction with school and achievement test scores for boys, but a significant relationship did exist between school satisfaction and composition and verbal achievement for girls. There was no significant relationship between girls' attitudes toward school and mathematics achievement. The findings also showed that there was a significant relationship between students' attitudes toward school and the report card grades they received from their English teacher. When comparing satisfaction toward school with teacher ratings the findings showed that there was a statistically significant relationship between students' attitudes toward school and the ratings given them by their English teacher,

but that no significant relationship existed between school satisfaction and the ratings given students by their vocational or fine arts teachers.

Richardson, Janice W. (Specialist in Education, Secondary Education, August, 1976)

A STUDY TO COMPARE VIEWS OF STUDENTS, PARENTS, AND SCHOOL PERSONNEL WITH RESPECT TO THE GOALS OF SECONDARY SOCIAL STUDIES

The purpose of this study was to compare views of students, parents, teachers, and school administrators of Clayton County concerning the objectives for the secondary social studies program. Students and parents for this study were randomly selected from the students and parents of students at North Clayton Senior High School. All social studies teachers in the senior high schools in the county were asked to participate in the survey. All administrators in the senior and junior high schools, and those administrators in the Clayton County Board of Education office to deal with the social studies curriculum were given surveys. The four groups rated the importance of twelve objectives of the secondary social studies program which had been extracted from the writing of leading social studies educators. Chi square was computed to determine whether or not actual differences existed in the ratings by the four groups. The results revealed that differences existed in the rating of nine of the objectives to the degree that further study was warranted. Another chi square was computed for each of the six pairs of groups: student-parents, student-teacher, student-administrators, teachers-administrators, parents-administrators and parents-teachers. It was concluded that significant differences did exist among the four groups compared concerning the objectives of the secondary social studies program. The greatest amount of difference was found between students and teachers. Teachers and administrators were similar in their viewing of the objectives. The comparisons found that the teachers tended to be the most affective-oriented group and students the more cognitive group.

Robertson, Alice A. (Specialist in Education, Elementary Education August, 1976)

THE EFFECTS OF SELECTED PUPIL VARIABLES ON THE READING ACHIEVEMENT OF FIRST, THIRD, AND SEVENTH GRADE PUPILS

This study was designed to analyze what effects and interactions the variables age, sex, and family placement have on reading achievement of students in grades one, three, and seven. The students in the study were all from one school, had birthdays in months older than June, July and August, and had never been retained during their school enrollment.

A 2 x 2 x 3 Factorial Analysis of Variance was the statistical technique employed. Program AVAR23 was used which yielded weighted means. This was necessary because of the unequal number of subjects per cell. The results showed that in grades three and seven age, sex, family placement and the interactions of these were not significant at the .05 level of significance. However, in grade one, the age of the child and the sex of the child ere significant. All other variables and interactons in grade one were not significant at the .05 level.

The program was determined to be a very successful one in this rural setting just as it had previously been found to be in the inner-city situation of Atlanta, Georgia. It is therefore suggested that the program be continued in this school as well as other schools in the county and that records continue to be kept for a continuous comparison from year to year.

Rouse, C. Paul (Specialist in Education, Administration and Supervision, August, 1976)

A BEHAVIOR MODIFICATION MODEL TO ENCOURAGE POSITIVE BEHAVIOR IN A SEVENTH DAY ADVENTIST ACADEMY RESIDENCE HALL

The purpose of this project was to design a residence hall management program which would reduce situations that tend to create negative feelings within the student. These negative feelings too often develop into many adverse reactions such as negative attitudes, low morale, and sometimes destrictiveness.

A comprehensive historical research of the literature revealed numerous principles and techinques successfully used in the classroom, but none were found in which a residence hall was the base for study. However, the methods of behavior modification used in these

studies reviewed were conducive to stimulating positive behavior at different times and in varied situations. Therefore, if care was used in application of these methods to a residence hall program, then that program should succeed.

The methods that were determined to be applicable to a residence hall program were the principles of positive reinforcement and aversive control. Positive reinforcement techniques used were based on a point system, or token reinforcement, and contingency contracting, both individual and group. The aversive control te techniques were response cost, time-out, and punishment.

It was concluded that this program would result in the student gaining in the following ways: (1) increased self-esteem; (2) increased self-perception; (3) greater self-confidence; (4) more positive attitude; (5) more positive relationship; (6) increased academic achievement; (7) more favorable habits.

With these conclusions, it was recommended that the program be given a nine-week trial period to be then evaluated as to its effectiveness.

It is pointed out that this program does not infer to be the panacea for eliminating negative feelings, nor does it represent the final word. What it does is to offer a different approach to residence hall management with the intent of making the dormitory a place where the residents experience a positive and harmonious development of their physical, mental, and spiritual powers.

Sampson, Larry E. (Specialist in Education, Secondary Education, March, 1976)

A TEACHER'S RESOURCE GUIDE FOR THE PREPARATION OF A HISTORY OF MURRAY COUNTY, GEORGIA

The purpose of this study is to provide a resource guide for high school teachrs of Murray County High School, Chatsworth, Georgia, to use in helping students prepare a history of the county. There exists no modern, up-to-date written history of Murray County at present. This guide is intended to present information and techniques in the collection and writing of local history. The intention is for it to be used with a class of selected high school students over a period of time.

Special emphasis is given to the discipline of oral history and how this technique may be used in gathering local history.

The section specifically dealing with Murray County is a collection of resource people, location of records, etc., to be used as leads into the deeper probing of the county's history.

Sentell, Susan D. (MA, History, August, 1976)

THE AMERICAN REVOLUTIONARY WAR SOLDIER AND HIS ATTITUDE TOWARD WAR, 1775-1783

The colonial soldier during the American Revolution was not a professional warrior. He had to quickly acquire milirary skills and strategy that would enable him to survive and eventually to win a protracted war. In addition to the dangers of conflict, the soldier was compelled to adjust to the boredom and lonliness that accompanies every war. Many soldiers deserted, some in order to return to their family and business responsibilities, others because of their hatred of the discipline inherent in army life. Recruiting was a persistent problem throughout the conflict. Ultimately, however, an adequate legion was raised and galvanized into an effective fighting force.

The task of directing amateur soldiers fell to amateur officiers. General Washington was plagued by inexperienced subalterns and by the petty machinations of Congress. Nevertheless, some American commanders—and several foreign volunteers—acted in a distinguished manner. The officers faced many of the same problems which confronted the enlisted men. In addition to inadequate food and shelter, the officer frequently went without pay. Like the conscripts, not a few officers deserted the Continental Army.

On the home front, civilian leaders faced the task of arousing and maintaining enthusiasm for the war. Newspapermen, pamphleteers like Thomas Paine and Samuel Adams, and numerous clergymen proved to be adroit propagandists.

At war's end the military ideas embraced by this generation were codified in the United States Constitution. The debates at the Constitutional Convention principally reflected the American's concern over standing armies and civilian control of the military. Throughout these debates and the ensuing ratifying conventions, the Founding Fathers constructed a document which reflected the colonial and Revoluntionary experience with warfare.

Shoemaker, Garland (Specialist in Education, Guidance and Counseling, June, 1976)

THE COMPARISON OF AUDIO-VISUAL DEMONSTRATION METHOD OF INSTRUCTION AND THE TRADITIONAL-LECTURE METHOD OF INSTRUCTION IN THE AREA OF JOB INTERVIEW SKILLS IN THE VOCATIONAL EDUCATIONAL AWARENESS PROGRAM OF NEWMAN HIGH SCHOOL

The problem of this thesis was to determine if there was a signifi-

cant difference in the achievement of high school students who had been taught Job Interview skills by the audio-visual demonstration method and those taught by the traditional lecture method of instruction. Students were to be tested by a pencil and paper test and by a simulated job interview.

The teacher taught two groups of ten students each for ten 55 minute periods. The control group was taught job interview skills by the traditional-lecture method of instruction where the teacher lectured and students listened. Questions were permitted; however, they were not encouraged. Questions from the end of the textbook were assigned to the student to answer.

The experimental group was taught job interview skills by the audio-visual demonstration method of instruction. One tape series and one tape-slide series was used. Student questions and discussion was encouraged. Also, each student participated in two role-playing job interviews.

The conclusions from this study were threefold:

1. That simulated experiences in the classroom do make a difference in student achievement when student evaluation is also based on simulated situations.

2. That there may be little difference in the effectiveness of audio-visual demonstration instruction and the traditional-lecture method of instruction when the evaluation to be given is just a pencil and paper test.

3. That the kind of evaluation given to a group of students may be as important as the instruction given those students.

Standridge, Robert D. (MA, English, March, 1976)

ALIENS IN BABYLON: THREE ORIGINAL SHORT STORIES DEMONSTRATING THE THEME OF ALIENATION IN LITERATURE WITH AN INTRODUCTION

The fiction of Joyce, Mann and Proust reveals man's estangement from society, nature and God. In *Ulysses,* Joyce created two contrasting examples of the alienated character. Bloom is an example of the estranged organization man, while Dedalus is the exiled artist. Leverkuhn, in Mann's *Dr. Faustus,* isolates himself to create art, while Castorp, in *The Magic Mountain,* alienates himself from life by his fascination with death. In *Swann's Way,* Proust suggests that Marcel is isolated from life by his tendency to cling to disease. Swann belongs neither to the bourgeois society nor the fashionable society, but oscillates between them.

The theme of alienation of these three writers is also the theme

of Mr. Stnad Standridge's short stories, "An Alien In Babylon", "Cantey", and "Doctor Spalt."

At the beginning of "An Alien In Babylon," Yucel is dressing for work. He walks to the university and enters the student center. He is told to wax the floor. Yucel waxes the floor and goes to a lecture. He sees the woman who has repelled his advances and speaks to her, but she rejects him. Disappointed, he walks to the sea and helps two men with a sailboat. Yucel is insulted by the fat man and starts a fight and is beaten.

At the beginning of "Cantey," Cantey and the narrator have returned from a lecture. They sit and talk on the campus lawn. It begins to rain, so they seek refuge in a chapel. Cantey acts strangely and talks about his father's suicide. They go to the hotel and decide to attend a concert. At the concert, Cantey is very stimulated by the music. At intermission, the narrator leaves to call his uncle and when he returns, Cantey has shot himself.

"Doctor Spalt" begins with Spalt pacing his room and brooding on his inability to create. He contemplates suicide. Dr. Mephitis enters the room and entices Dr. Spalt to the hotel nightclub. The psychiatrist-professor tells Dr. Spalt that Spalt is an insincere person and says that Spalt's inability to create anything but superficial art, is due to his lack of passion for the flesh. Miss Chambers and Miss Long enter the nightclub. Dr. Spalt and Miss Chambers dance and he excuses himself to go to the bathroom, instead he leaves the nightclub and goes for a walk by the sea.

Summerville, Sandra P. (Specialist in Education, Elementary Education, August, 1976)

TEACHING THE DOLCH SIGHT WORD LIST AS A MEANS OF IMPROVING READING ACHIEVEMENT AT THE SECOND GRADE LEVEL

This experimental research design was undertaken to determine if the teaching of the Dolch Sight Word List would result in an increased level of skill in reading achievement.

For the purposes of this study all second grade students at Eastside School were tested and subjects were chosen for inclusion in the study on the basis of test scores on the Metropolitan Achievement Test. Primary II, Form G. Only those students whose scores on total reading were no greater than 1.3 grade equivalent were considered for inclusion as subjects. Only students who had completed first grade at Eastside School were considered for inclusion as subjects. Subjects selected were 22 experimental group and 24 control group second grade students matched on the bases of age, sex, IQ, race, reading

achievement test scores. and socio-economic level. These subjects represented the medium range for second grade with both extremes of high and low scores being eliminated from the study.

Groups received instruction that was parallel in all respects except that the experimental group received intensive instruction in the Dolch Sight Word List.

A significance level of .05 was established as indicating a statistically significant event which could not be attributed to the probability of chance. Results for the total group showed no significant difference at the the t value of 1.37 between the two groups in the area of word knowledge. There was a significance difference at the t value of 2.84 in favor of the experimental group in the area of word analysis. This was statistically different at the .01 level of reading. This was statistically different at the .001 level of significance. There was a significant difference at a t value of 3.16 in favor of the experimental group in the area of total reading. This was statistically different at the .01 level of significance. There was a significant difference at a t value of 4.22 in favor of the experimental group in the area of reading. This was statistically different at the .001 level of significance. There was a significance difference at a t value of 3.16 in favor of the experimental group in the area of total reading. This was statistically different at the .01 level of significance.

It was concluded that while there was no signficant difference in the area of word knowledge, the Dolch Sight Word List is still a valuable tool in the teaching of reading in view of the significance found in the areas of word analysis, reading, and total reading.

In the course of an ancillary analyses of data generated by this study, it was found that boys responded to a greater degree than girls to this method of instruction. It was also found that the caucasian population responded to a greater degree to this method of instruction than the black population. These findings pose implications for further study.

Walton, Ronnie B. (Specialist in Education, Secondary Education, March, 1976)

A COMPARISON OF METHODS FOR TEACHING RECOGNITION VOCABULARY TO HIGH SCHOOL STUDENTS

The purpose of this study was to determine whether students learn meanings of new words most effectively when taught by the context method, when taught by the dictionary method, or when no specific vocabulary instruction.

The seventy-five subjects for the study were selected from three tenth grade English classes at Carrollton High School. Two classes served as experimental groups while the third served as the control group.

A pretest was administered to each group immediately prior to the beginning of the teaching unit which was comprised of reading and discussion in class Dosen's play, *An Enemy of the People.* An identical posttest was given a week after the completion of the unit.

The null hypothesis tested was stated as follows: There is no significant difference in improvement of reading vocabulary among a group of high school students taught by the dictionary method, one taught by the teacher-directed context method, and a control group receiving no special emphasis on word study.

An F-test was used to interpret the data. The variable of teaching method was not found to be significant at the .05 level.

Implications derived from the study include the following:

(1)Students' word recognition skills are not necessarily improved by implementing direct teaching methods such as the context and dictionary study methods.

(2)Perhaps the incidental method of word study—broad reading without specific attention devoted to individual words—is as effective in improving word recognition skills as are more direct methods.

Weiss, Steven M. (MA, Psychology, March, 1976)

A STUDY OF SPIRITUAL PEAK EXPERIENCE AND RELIGIOUS ECSTACY

This thesis has been produced as an audiovisual tape rather than a written manuscript.

Although accompanied by this abstract and another, more comprehensive documentation of sources, methodology and explanations of purpose, it must be emphasized that the tape rather than the written material constitutes the substance of the theses.

The tape is about a group of people and the nature of their religious experiences. They believe in a strict literal interpretation of the Bible (both Old and New Testaments) and because of this, they see the passages in St. Mark, Chapter 16, Verses 16-18, as a direct injunction to handle venomous snakes, drink deadly substances (most often strychnine), cast out devils, speak in unknown tongues and perform healing by "the laying on of hands."

The videotape is a one-hour edited version of approximately twelve hours of footage. It was taped at the Holiness Church of God In Jesus Name in Kingston, Georgia during three separate worship services.

It is an attempt to capture the essence of the spiritual experience of the worshipers as well as to show the types of rituals and activities which are a part of the worship services.

Amick, Hervey W. (Specialist in Education, Administration and Supervision, March, 1977)

THE MANAGEMENT ROLE OF THE HIGH SCHOOL PRINCIPAL AND RELATED TASKS OF DEPARTMENT HEADS

Principals of large, suburban high schools are confronted daily with a variety of administrative and educational problems which demand positive solutions. Basic approaches to the job could include, first, a clear and realistic role definition for principals and, second, clarification of those duties which can be delegated to others. The problem of this study was to describe the managerial role of the principal from a classical management viewpoint, as presented by Koontz and O'Donnell, and to specify those tasks delegated to department heads. The viewpoints of a number of authorities in the field of educational research were analyzed.

Current literature on the principal's role as a manager and on duties assumed by department heads was reviewed. Educational literature was devoid of research concerning department heads' duties; for that reason Holland's paper, "The Role of the Secondary School Department Head in Georgia," was used as a major source for this paper. The managerial role of the principal was analyzed and managerial tasks of department heads were defined. Shared responsibilities were noted, and a control system was suggested.

It was found that a highly useful method of dividing up the total task of management was in terms of planning, organizing, staffing, directing, and controlling. Within these areas, the managerial roles of principals and department heads were discussed citing those specific duties which could be performed by principals and department heads. The effective performance of each of these tasks contributed to the overall management of the school.

The following points emerged as findings from the study:

1. The pilot group of students illustrated improvement in three areas:

a. Students placed on contract illustrated a decreased rate of absenteeism in comparison to a comparable time prior to the contract.

b. Students placed on contract illustrated positive gains of approximately one-half of a letter grade in academic average.

c. Students placed on contract illustrated a decrease in the number of times they were referred to the office for discipline stemming from misbehavior.

2. The pilot students were offered a chance to change in order to gain from the contract approach more than from the method of suspension and retention by the juvenile authorities.

a. Satisfactory compliance with regulations of the contract could lead to a shortenting of the probationary period.

b. In-school suspension avoided interrupting the continuity of his education.

3. The contract approach provided advantages to the administrative staff:

a. There was no loss of finances due to absenteeism.

b. There was less likelihood of subjection to court action under the Forteenth Amendment of the United States Constitution.

4. Student behavior was modified into more acceptable standards as illustrated by the sharp decrease in the number of office referrals for the major recommendations for the contract model are for:

1. Reorganizing the program to provide a full time behavior disorder trained teacher and visiting teacher to administer the program.

2. Enlarging the program to incorporate other students outside those on probation.

3. Continued experimentation with the contract approach to determine if the effects were due exclusively to the contract or other factors.

4. Alerting principals and system heads to the contract approach as a possible development in treating the serious problem of drug abuse.

Beggs, Rosemary P. (Specialist in Education, Elementary Education, June, 1977)

THE WECHSLER INTELLIGENCE SCALE FOR CHILDREN IN DIAGNOSING SPELLING DEFICIENCIES OF LEARNING DISABILITY STUDENTS

Teachers each year are confronted with students of average or above average ability who are extremely poor spellers. The students may be admonished by the teacher to study the spelling list. Or the teacher may be trial and error experimentation find a new method of teaching which fosters spelling success. From general observations over several years, there seems to be very few individualized spelling

programs although small group and individualized reading and arithmetic programs are widely accepted throughout the country.

There are many questions concerning an effective method of instruction. The purpose of this research will be directed toward learning strategies to improve spelling.

Many of the students scheduled for extra help in Learning Disability Resource room in Cobb County have been given the Wechsler Intelligence Scale for Children. They have also been given the Wide Range Achievement Test to measure academic achievement in reading, spelling and arithmetic. Using these two diagnostic tests, an anaylsis will be made for indications of common deficits in children with spelling problems.

Blake, Kenneth R. (Specialist in Education, Administration and Supervision, March, 1977)

A SYSTEM MODEL OF CONTRACT TREATMENT AND REHABILITATION OF JUNIOR HIGH STUDENTS CONVICTED OF DRUG ABUSE AND RELATED CRIMES

The tremendous increase in drug abuse in the public school system has brought about great pressure, emphasis, and demand on administrators to establish policies dealing with the drug problem. The purpose of this paper is the presentation of an effective model to be used in public schools in dealing with drgu drug abuse and related crimes. The proposed model is a contract approach. An attempt was made to show that this approach was more effective than the traditional method of suspension of the students and/or his retention by the juvenile authorities.

The pilot group for the study consisted of 10 junior high school students who, at the time they were placed on contract, were on probation with the Clayton County Juvenile Court for drug abuse and related crimes. The actual time involved in the study of these students was the one quarter they were on contract together.

The contract approach literally involved the signing of a contract with specific performance standards. The contract stipulated regulations concerning a student's behavior and indicated the reward given if regulations were maintained and the punishment of an infraction was committed. The contract approach operated on the basis of a point system, and the contract stipulated the number of points which were to be earned weekly.

Bonds, Neil C. (Specialist in Education, Secondary Education, March, 1977)

A STUDY COMPARING THE EFFECT OF TEACHING PUNCTUATION WITH AND WITHOUT RULES

The purpose of this study was to compare students' performance in punctuation when taught by two different methods; by noting intonation cues and sentence patterns and when taught by using traditional rules.

The sixty-six subjects for the study were two tenth-grade English merit (advanced) classes at Marietta High School, Marietta, Georgia. One group served as an experimental group while the second group served as the control group.

A pretest was administered to both groups immediately prior to the beginning of the teaching unit on the comma and the semi-colon. An identical posttest was given immediately upon the completion of the six-week unit.

The null hypothesis tested was stated as follows: There is no significant difference between the students' proficiency in punctuation when taught by traditional rules and their proficiency when taught by the use of intonation cues.

The t-test was used to interpret the data. The variable of teaching method was not found to be significant at the .05 level.

The following implications were derived from this study:

1. Students' punctuation skills do improve whether taught by intonation cues and sentence patterns or by study of traditional rules.
2. The results of the study did support the use of the intonation method as an equally effective alternative to the method of using traditional grammar rules.

Cantey, Patricia L. (Specialist in Education, Elementary Education, March, 1977)

A COMPARISON OF ACADEMIC ACHIEVEMENT OF CHILDREN IN RESOURCE AND SELF-CONTAINED LEARNING DISABILITIES CLASSES

This study was designed to compare the academic achievement of children in resource and self-contained learning disabilities classes. The pretest and posttest of the Gray-Votaw-Rogers Achievement Test were used to determine if there were a significant difference between the two class placements. The four subtests used were read-

ing vocabulary, reading comprehension, spelling, and arithmetic computation.

There were 295 children involved in this study, and they were assigned to one of nine self-contained or eighteen resource classes for the entire year, 1974-1975. The testing for each group was done by the special education teacher for that group.

The t-test for independent means was used to test the hypotheses comparing differences between the two groups and between the boys and girls. The t-test for dependent means was used to test hypotheses comparing pretest-posttest gain measures on the same individuals.

Significant gains were made by both groups, and both sexes. A significant difference was found in favor of the self-contained group in one subtest, arithmetic computation.

Choate, Donovan H. (Specialist in Education, Secondary Education, March, 1977)

A READABILITY SURVEY OF TWENTY-FIVE JUNIOR HIGH SCHOOL LEVEL SOCIAL STUDIES TEXTBOOKS

The readability levels of ten geography, ten United States history, and revised versions of the Fry Readability Graph and the SMOG Grading Formula.

The revised Fry Readability Graph showed the textbooks assessed to be approximately one grade level higher than the original Fry formula, which did not include the counting of proper nouns as an indicator of reading difficulty.

A comparison of the revised Fry Readability Graph to the SMOG Grading Formula resulted in the SMOG formula placing most of the textbooks at from two to three grade levels above the revised Fry formula. Both formulas indicated that most junior high level social studies textbooks are too difficult for many students for whom they are intended. This indication is based on a comparison of the readability levels obtained from the two formulas to the scores of seventh and eighth grade students in Floyd County on the Short Form Test of Academic Aptitude administered in October, 1975.

Both the revised Fry Readability Graph and the SMOG Grading Formula showed the United States history texts to be written at a less difficult level than the civics or geography texts. The geography texts were shown to be approximately one grade level of difficulty higher than the civics texts according to the SMOG formula, but the Fry formula showed geography texts to be one grade level lower than the civics textbooks.

The revised Fry Readability Graph was applied to each textbook to assess variations in readability. The results of this application revealed that the textbooks surveyed possessed a range of at least one grade level of reading difficulty, and most textbooks had internal variations of three or more grade levels.

Cook, Jack P. (Specialist in Education, Guidance and Counseling, June, 1977)

COUNSELING ADULT WOMEN FOR CAREER DEVELOPMENT: A GROUP APPROACH

The traditional roles of women are being challenged and counselors need to find new and more effective ways of assisting female student with vocational decisions and life style options. The review of literature for this project revealed that there has been a tendency to neglect exploration of career options for women in career development theories. This project attempted to address the needs of women for career development counseling and extract and implement elements of vocational theories applicable to women.

The project describes a group vocational counseling encounter with adult women and the resulting attitude changes. The basic objective of this action research project was to provide an atmosphere in which women could have an exposure to the forces and circumstances that shaped their personalities and lives in addition to an exploration into self-concept, components of interest, individual talents, decision making, strengths and weaknesses. The desired behavioral outcome was accopmplished in that, with greater self-awareness and increased self-esteem, the women participants were able to report expanded decision making abilities in the area of career choice.

The research methodology involved administration of a researcher designed pre-course/post-course attitude evaluation to each of the 35 adult women participants. The 10 items on the evaluation corresponded to one or more of the topics covered in six group sessions. The evaluation was a Likert type rating scale designed to assess attitude changes over the span of the six week (two hours each week) group counseling experience. Each of the 10 items were paired (pre/post) and treated statistically using a t-test for correlated samples. Using a one-tailed test, all 10 items were significant at the .01 level.

The results indicated that significant changes occurred in the women's attitudes about themselves and their abilities. The conclusions indicate a definite need among women for exploration of their human potential as it relates to self-concept and career development.

Costopoulos, Photios (MA, English, March, 1977)

BYRON'S PHILHELLENISM

It is true that in the first thirty years of the last century many writers and poets expressed their philhellenic feelings and ideas in their works. But Byron was the only poet whose life and poetry was much related to the current of Philhellenism. When I speak of the philhellenism of his life, I mean his two journeys to Greece, which played an important role not only in his life but also in his poetry. This is the reason that my thesis is divided into the following three chapters: "Byron's First Journey to Greece", "Byron's Last Journey to Greece." and "Byron's Philhellenism in his Poetry."

In the first chapter I give an account of the journey in which Byron and his friend John Cam Hobhouse had the opportunity not only to visit many beautiful parts of Greece but also to become well acquainted with the Greek people. During this time in Greece Byron wrote the two cantos of *Childe Harold,* which made him a famous poet. He also had the opportunity to attain considerable mastery of the modern Greek language. Moreover, some of the most important parts of this chapter are the special information that I can bring to this thesis, either as a citizen of Greece or a reader of literature. Of course some special information can also be found in the following chapters, but in this one the special information is my main purpose.

In the second chapter, I give an account of Byron's last journey to Greece according to his most important biographers. In the conclusion of this chapter I find the opportunity to express my own opinion about Byron's philhellenism and the Greeks. According to this opinion Byron was sincere in his love for Greece and went to Missolonghi for the purpose of liberating an enslaved people. The Greeks, therefore, have never forgotten Byron. They have loved him as a national hero.

In the third chapter, I try to point out the importance of *Childe Harold* in the current of philhellenism in English literature. Moreover, I refer to the ways in which Byron expressed his philhellenism in his poetry. Byron's philhellenism is quite different from that of the other Romantic poets.

In the conclusion of this chapter I relate Byron's philhellenism to the efforts of the Third World in our century and the ideas of our contemporary writers.

Dale, Karen L. (MA, Psychology, June, 1977)

ACCEPTANCE: A DIFFERENT WAY OF KNOWING

Acceptance and consciousness are two ways of knowing which provide us with two different descriptions of the world. Consciousness, through explicit knowing, is that function which differentiates, separates, divides and labels the world. Acceptance, through tacit knowing, is that function which perceives the whole through its parts, and relates the parts to their context in the whole. In this paper I have described the implications of acceptance as a way of knowing in the context of man's relationship to himself, to significant others, and to the Divine or Transcendent. The postscript deals with acceptance and its implications for our postindustrial society.

Donges, Carolyn S. (Specialist in Education, Guidance and Counseling, March, 1977)

THE ORGANIZATION, IMPLEMENTATION AND EVALUATION OF THE TEEN INVOLVEMENT PROGRAM AT NORTH CLAYTON SENIOR HIGH SCHOOL

This study sought to compile a handbook or guide for a peer counseling program, called Teen Involvement, at North Clayton Senior High School in College Park, Georgia. The organization, implementation and evaluation of such a program was outlined in detail in this study.

Procedures for organizing the program through the administration, faculty and student body support was discussed and examples were cited of the various procedures.

Implementation of the program was described in detail through a day-by-day description of the training sessions set up for the peer counselors. Clayton County Mental Health assisted in the training sessions as resource personnel.

The AS I SEE MYSELF SCALE was administered to the peer counselors and to a sample of students not participating in the program. Questionnaires for evaluation were administered to the Peer Counselors and to the Student Counselees in the sixth and eighth grades who participated in the program.

Comparisons of mean scores of Peer Counselors and students not participating in the program on the AS I SEE MYSELF SCALE were catagorized.

The results of this study reported that, overall, students participating in the Teen Involvement Program, either as Peer Counselors or Student Counselees, had a positive view of self and others, were

more aware of their own feelings and feelings of others, and felt that their participation in the program had changed attitudes toward the regular school program.

Edwards, Annie B. (Specialist in Education, Elementary Education, March, 1977)

A GUIDE FOR THE STAFF OF THE TITLE I PROGRAM OF DOUGLAS COUNTY

This study was designed to prepare a useful guide for the entire staff of the Title I Program of Douglas County, Douglasville, Georgia. Since the Title I Program deals with remedial reading, the review of literature was in this area.

Many staff members came into the program not realizing exactly what the Title I Program really is. A brief history of the program was written to provide them with a better understanding of the program in which they were involved.

A major part of the guide interprets the various aspects of the program. Pertinent information related to the objectives of the program, to the materials used in the program, and to the guidelines set forth by the government is included.$

The Title I teachers had the opportunity to evaluate the guide. According to their evaluation, the study was a very profitable endeavor.

Edwards, Katherine C. (Specialist in Education, Elementary Education, March, 1977)

A COMPARATIVE STUDY OF THE ACADEMIC ACHIEVEMENT OF TWO GROUPS OF HIGH SCHOOL EDUCABLE MENTALLY RETARDED STUDENTS

The study was undertaken to compare the academic achievement of two groups of high school Educable Mentally Retarded students. All of the students involved in the study came from a school system located in the northern part of Georgia. For the purpose of this study, this system is referred to as System X. One of the two groups, referred to as Group I or the EMR Group, had been enrolled in self-contained EMR classes for more than two years. The mean time, in EMR classes for this group, was almost four years. The other group, referred to as Group II or the Regular Classroom Group, had been enrolled in self-contained EMR classes for less than two years. Most of these students had been identified as EMR and had entered EMR

classes during the 1975-1976 school year. These two groups (Groups I and II) were regrouped to form Group III and Group IV. All of the students involved in the study had been administered the *Wechsler Intelligence Scale for Children* and the *Wide Range Achievement Test* at least once. Group IV consisted of students who had a pretest and posttest for both the WISC and the WRAT. Group III had been tested only once. This group was used only for classification. No statistical analyses were conducted on this group.

There was no significant difference in IQ's of the two groups. Based on the percentage of students receiving free lunches, both groups were similar socio-economically. When computed the mean CA of the Regular Class Group was six months more than the EMR Group. The results of the statistical analyses indicate that EMR students who had remained in regular classes had made significant gains in reading, spelling and arithmetic. In each of the three academic areas (reading, spelling and math) they had achieved significantly more than their expected gain based on the Melcher Formula. In none of the academic areas did the EMR Group reach their expected gain. In almost four years of enrollment in self-contained EMR classes, the EMR Group made less than a three month gain in reading, less than a three month gain in spelling, and less than a two month gain in arithmetic. The statistical findings of the study were highly indicative that the self-contained EMR classes in System X were not conductive to the academic achievement of the System's Educable Mentally Retarded Students.

Faires, Gayle S. (Specialist in Education, Elementary Education, March, 1977)

THE STUDY OF STUDENT EVALUATIONS OF THE ELEMENTARY-READING MASTER OF EDUCATION PROGRAMS IN THE SCHOOL OF EDUCATION AT WEST GEORGIA COLLEGE FROM FALL, 1975, THROUGH SUMMER, 1976

Since the inception of graduate work at West Georgia College during the summer quarter of 1967 many changes have taken place. Along with two general organizational changes in administrative structure, there have been numerous departmental and program modifications. The creation of an early childhood education department, separating it from elementary education, and the creation of a graduate program in reading within the department of elementary education have resulted from previous evaluative endeavors.

This study is a formal attempt at updating the student assess-

ments of the master of education programs in both elementary education and reading.

The data presented are a tabulation of 141 responses anonymously given by all of those graduating with master of education degrees in elementary education and reading for the fall quarter 1975, through summer quarter 1976.

The results showed that the students had positive reactions toward the graduate programs in elementary education and reading at West Georgia College.

Franklin, Gail E. (Specialist in Education, Secondary Education, March, 1977)

A STUDY OF THE EFFECTS OF A FUNCTIONAL READING STRATEGY ON THE PERFORMANCE OF NINTH GRADE SOCIAL STUDIES STUDENTS

The purpose of this study was to determine if a functional reading strategy improved students' ability to read social studies materials as well as their general reading ability.

The subjects for this study were forty-two ninth grade students at Lithia Springs Comprehensive High School in Douglas County, Georgia. The students, enrolled in the lowest track of social studies classes, made up two classes which were the experimental group and the control group.

The experimental group was taught for a two-month period using a functional reading strategy, while the control group was taught content only.

The evaluative instrument was Form 3A and Form 3B of the Sequential Test of Educational Progress in Reading and the Sequential Test of Educational Progress in Social Studies. These were administered as pretests and posttests.

The study found that there was no significant difference in either the ability read social studies materials or in the general reading ability between those students exposed to a functional reading strategy and those which were taught content only.

Good, John C. (Specialist in Education, Administration and Supervision, June, 1977)

TEACHER SELECTION PROCEDURES AND CRITERIA FOR THE SMALL, RURAL GEORGIA ELEMENTARY SCHOOL

This study was done as an applied research project to develop a

teacher selection for the principal of a small, rural Georgia elementary school. An oversupply of teachers assuring larger-than-ever numbers of applicants from which to choose and new regulations governing teacher dismissal have made the development of an effective teacher selection process an immediate need.

A review of the related literature was conducted and a survey instrument which contained the selection criteria recognized as important in the literature was developed. The questionnaire used by May and Doerge (1972) as a model. The principal of 81 elementary schools in Georgia with 20 or fewer teachers were surveyed. The rank-order of the criteria was determined and the results were used to develop the teacher selection process for the principal of the small, rural Georgia elementary school.

The survey indicated nine criteria considered essential to the teacher selection process by the principals surveyed. They are: (1) classroom control, (2) health, (3) attitude toward authority, (4) organization of instructional material, (5) personality, (6) moral character, (7) opinion of the previous principal, (8) appearance, and (9) verbal faculty.

The teacher selection process developed as a result of this study contains nine steps through which the principal can collect and evaluate information about the candidate pertaining to the essential criteria. These steps are: (1) submission of written application, (2) review of application, (3) interview by principal, (4) rating of candidate by the principal, (5) reference check, (6) interview by appropriate staff members, (7) rating of candidate by appropriate staff members, (8) comparison of ratings, and (9) decision by principal to hire or not to hire.

Hale, Elaine M. (Specialist in Education, Elementary Education, March, 1977)

THE EFFECTS OF SEX-BIASED CONTENT OF THE PROBLEM SOLVING PERFORMANCE OF SEVENTH AND EIGHTH GRADE STUDENTS

A study was conducted to determine the possible effects of sex-biased content on the problem solving performance of 419 seventh and eighth grade students. A problem solving test was administered and four types of scores were compared by sex and grade level—male-biased problems, female-biased problems, neutral problems, and total problems. IQ tests were also administered and scores were derived for the data. A one-way analysis of covariance was used in the data analysis. When the effects of IQ were statistically eliminated, it

was found that sex-biased content had no significant effects on the problem solving performance of the subjects. Therefore, the null hypotheses were rejected at the .05 level of significance.

Herrick, Elaine S. (Specialist in Education, Elementary Education, March, 1977)

THE EFFECTS OF A SIMULATION GAME ON THE LEARNING ACHIEVEMENT IN SOCIAL STUDIES OF THIRD GRADE STUDENTS

This study was designed to determine the potential effects of a simulation game on the learning achievement in social studies of third grade students. All students involved in this study were from a rural school within Carroll County, Georgia. Students from one of the third grade classes became the experimental group and participated in a simulation game in social studies. Students from another third grade class became the control group and received the same social studies instruction by a "read the textbook-discussion" approach.

A social studies test was administered as the pretest and posttest for both groups. A statistical comparison of the mean gain scores of the experimental and control groups were made. A significant difference at the .01 level of confidence favoring the experimental group resulted. Findings indicate that the simulation game method in social studies can be beneficial in the third grade as a means of increasing learning achievement.

Hill, Richard G. (Specialist in Education, Guidance and Counseling, March, 1977)

THE COLLEGE DROPOUT: A STUDY OF ATTRITION IN HIGHER EDUCATION AT DALTON JUNIOR COLLEGE

There is a significant number of students who drop out of colleges and universities before the completion of a planned program of study or fulfillment of requirements for a degree; therefore, the central problem of this study was to examine the effects of possible contributing factors, more specifically those of academics, to this withdrawal dilemma. The purpose of this investigation, consequently, was to compare the academic performance and potential ability of those students who fail to complete a program of study or to satisfy degree requirements with the performance and ability of those pupils who successfully accomplish such an endeavor.

Subjects selected for this study were freshmen and sophomore

students entering Dalton Junior College for the first time during the 1972-73 academic year. Dalton Junior College is a coeducational, nonresidential, liberal arts instituion located in Dalton, Georgia, with a student population of approximately 1,800. The majority of the subjects came from a five-county area immediately surrounding the institution, although a small percentage were from other localities.

Random selection procedures or sampling techniques were not employed since all newly enrolled students were considered in the investigation. Each pupil was assessed during summer quarter, 1976, and classified according to the following three major divisions: (1) dropout; (2) transfer; or (3) graduate. Those whom the above three categories did not suit could be assumed still enrolled in the institution and were not considered in this study as also were those classified as transfer students not included. An initial population of 779 subjects yielded a total of 224 cases satisfying criteria for inclusion in the study. From data stored in the office of records and admissions at Dalton Junior College, the sex, high school average, cumulative college grade point average at time of departure (either withdrawal or graduation), and Scholastic Aptitude Test scores (both math and verbal) were collected on those remaining students classified as dropouts or graduate.

With respect to the sex of each subject, the means, standard deviations, and differences in the means for both the dropout and graduate groups were computed in order to test each of the hypotheses of this study. To determine the statistical significance of the difference between the means of the variables under consideration, the *t*-test was employed. In this study, graduate means were greater with regard to all variables and *t*-ratios indicated that the differences between the means of the dropout and graduate groups were significant at the .05 level or higher.

Findings derived from this investigation revealed that the academic performance and potential ability of those students who fail to complete a program of study or to satisfy degree requirements differ significantly from the performance and ability of those pupils who successfully complete such an endeavor. More specifically, those in the graduate category statistically proved superior both in the area of potential ability and academic performance to those who concluded their formal education before such a time as they received a certificate or diploma for studies successfully completed. Therefore, as these results indicate, those scholastically inclined students, in terms of both achievement and aptitude, appear less likely to withdraw permanently from the institution than do those pupils not so intellectually oriented.

It is recommended that (1) this study be replicated on a larger scale using a broader sample of subjects from many different institu-

tions; (2) less emphasis be placed on recruitment of students and instead greater attention be given to increasing the number of students who remain in school after once enrolling; (3) the predicted grade point average be computed for all students upon their initial entrance to the institution as a means of identifying those who perhaps are potential dropouts; (4) an indicator of the future academic success (a ratio of the cumulative college grade point average to the predicted college grade point average) be computed for all pupils immediately following their first quarter in attendance at the institution; and (5) a complete profile, similar in design to this study of attrition, be developed for all students at the earliest possible time after their admission to and entrance in the institution since academic variables have proven to be for this study good predictors of student retention.

Horton, Reta N.H. (MA, Psychology, June, 1977)

THE INDIVIDUAL'S RESPONSIBILITY TO HIMSELF: A PHILOSOPHICAL AND PSYCHOLOGICAL INQUIRY INTO THE BASES OF HUMAN AND SOCIAL PROBLEMS

A level of spiritual and ethical commitment is a prerequisite for a healthy society. The apparent increase in social problems in modern industrial societies can be traced, at least, in part to a decrease in such commitment. Commitment begins at the individual level; hence it is at the individual level that a lasting answer to society's problems must be sought. The present study attemptedd to delineate the nature of this commitment, the manner of its decline, and ways of restoring it.

The term "responsibility" was examined in terms of the two components: freedom and obligation. Freedom represents a basic condition of human existence, whether innate or acquired through struggle. In order to be responsible, it is first necessary to be free; but freedom does not guarantee the fulfillment of obligation. Otherwise stated, freedom *from* does not guarantee freedom *to.* Obligation may be interpreted either as a moral dictum or as a desirable state whose acquisition is dictated by necessity. Moral obligation has been questioned, but the same state may be sought because it is desirable. Subjective motivation is cardinal: doing something because it is desirable can be enriching to the person and his relationships.

The failure to live responsibly was shown to have a number of precursors—historical, cultural, and personal. The forces making for failure surround the person and reside with him. The cultivation of originality—the embodiment of responsibility to oneself—is admit-

tedly a difficult task. Yet the task must be carried out, even if one fails at it.

A program for the development of self was outlined. It included the following elements: self-observation; deconditioning of old ideas and habits; overcoming social pressure, fear of rejection, and loneliness; commitment to oneself; development of a philosophy; and transfer to the social sphere. It was shown how each phase lays the ground-work for the one succeeding it; collectively, these elements contribute to the benefit of society.

A number of arguments were presented in support of the assertion that the pursuit of self-interest benefits society. These include the following: that self-observation enhances sensitivity for the other; that casting off destructive cultural introjects can be of demonstrable benefit to the individual; that self-actualizing individuals, while not necessarily conforming, are often modelss of social interest; and that a sane philosophy of life would promote the interests of both self and society. It was concluded that responsibility to oneself is a prerequisite to social responsibility.

Jones, Sandra P. (Specialist in Education, Secondary Education, March, 1977)

A QUANTITATIVE ANALYSIS OF THE USE OF CHRISTENSEN'S CUMULATIVE SENTENCE IN THE EXPOSITORY WRITINGS OF SELECTED PROFESSIONAL WRITERS

The purpose of this study was to measure to what extent skilled professional writers use the sentence pattern described by Francis Christensen as cumulative. Christensen observed that professional writers used the cumulative sentence more frequently than they used sentences with modifiers before and within the main clause. He also noted that professional writers had a high frequency of free modifiers in all positions in the sentence. This theory formed the basis for *The Christensen Rhetoric Program.*

For this study, samples of writings of skilled professionals were the twenty-five essays constituting "A Standard Corpus of Contemporary American Expository Essays" (SCCAEE). The essays were a randomly selected group of completely expository essays from five magazines identified by college professors as consistently containing the best modern prose. The essays were published between January 1964 and March 1965 inclusive in *The Atlantic, Harper's, The New Yorker, The Reporter,* and *Saturday Review.*

The researcher counted the first fifty T-units after the introductory paragraph in each essay. The count was made in order to deter-

mine (1) the percentage of words in base clauses and in free modifiers, (2) the average number of words in free modifiers and in base clauses compared to the average T-unit lengths, (3) the number of words in free modifiers in initial, medial, and final positions in the sentence. The frequency of free modifiers in the final position was measured by comparing the number of free modifiers in the final position with the number in all positions.

The results of the study showed that the writers in SCCAEE did not use free modifiers to the extent that Christensen described. When they did use free modifiers, they did use them in the final position more often than in the initial and medial positions. The writers did not use the appositive and the verbid clause as frequently as Christensen had suggested. No significant correlation was found between the average T-unit length in each essay and the writer's use of free modifiers. This finding indicated that the use of free modifiers may not be a valid index of syntactic maturity.

The researcher concluded that the use of the cumulative sentence by skilled professional writers was not extensive enough to justify its being the basis for an entire program of composition. The program might be used as a method of teaching students to use free modifiers to vary their style and to expand their ideas in sentences and paragraphs. It fails as a total composition program because it attempts to short-cut the natural language growth of the student.

Reserch is needed to compare the overall quality of students' writing when taught by *The Christensen Rhetoric Program* and when taught by other methods. Research is also needed to study the effect on overall composition quality of the Christensen method when it is used in conjunction with one or more other methods.

Knott, Charles E. (MA, Psychology, June, 1977)

ADVENTURES IN HUMANE TEACHING TOWARD PERSONAL AND INTERPERSONAL GROWTH

This paper describes an attempt on the part of a college instructor to integrate his knowledge of humanistic psychology into his teaching. There also is an extensive description of the author's own views on education in America; these views are developed against a background presentation of his own educational experiences. Primarily, the paper discusses group process, experiential games, role play, and individual therapy in terms of their effect on student and teacher in an experimental classroom. Student reactions to classroom events are documented. Further, teaching is shown to be an individuating experience when the instructor makes conscious efforts to form in-depth

relationships with students. Such relationships, aimed at challenging the total personality of teacher and student, are seen as bringing a new meaning and a new affective level to the classroom.

Lynch, Jan Hope (MA, Guidance and Counseling, March, 1977)

A STUDY OF ADOLESCENTS' PERCEPTIONS OF DIVORCE

This descriptive study was conducted during November, 1976, at M. D. Collins High School in College Park, Georgia. The intent of the study was to gain a greater insight regarding the number of students with divorced parents and the resultant effects of the divorce as perceived by the students. A better understanding of the magnitude and the nature of the divorced-family problem was desired by the guidance and counseling staff in order to provide more effective and appropriate services to students from divorced homes.

A questionnaire using the survey technique was administered to all of the students. The results of the questionnaires of the students from intact homes were compared according to the student's age and sex. The results of the questionnaires of student from divorced families were compared according to the student's age at the time of the parental divorce and the student's sex.

The results of the study indicated that of the eighty-three percent of the student body who responded to the questionnaire, thirty-one percent were from divorced homes. After comparing the total percentage responses of the sex and age groupings, the notable variations and implications were given for each question. Based on the implications of the study, the guidance and counseling staff concluded that there is a pronounce need to implement and extend programs designed to facilitate the coping and growth development of students with family problems, particularly those from homes with divorced parents. The need for a group counseling program for divorced-home students was especially emphasized by the response of thirty-eight percent of the students with divorced parents that they would like to participate in group counseling to discuss their feelings with other students from divorced homes.

May, Morton J., II (MA, Psychology, March, 1977)

APPROVAL CERTIFICATE SELF AND ENERGY

The bioenergetic tradition and the mystical tradition both make inquiries into the nature of self and into the nauture of life energy. These inquiries are very different, yet they have much in common.

Close analysis of what the two traditions say about each subject leads to the conclusion that they can be synthesized into a single tradition. The result is a continuum of growth stretching from dis-integration (psychosis) to the mystical experience. Each tradition is seen as appropriate to that area of the continuum from which they principally draw their clientele. A definition of self is proposed which combines bioenergetic and mystic conceptions.

Northcutt, J. Carla (Specialist in Education, Secondary Education, March, 1977)

THE STATE OF THE ENGLISH CURRICULUM COBB COUNTY, GEORGIA 1976

In an effort to determine if statistically significant differences exist in the ranking of selected English goals among the groups of persons involved in the educational process in Cobb County, Georgia, a random sampling procedure selected one hundred freshmen and their parents and one hundred seniors and their parents from Wheeler High School, Marietta, Georgia, to respond to a questionnaire. High School administrators and High School English teachers from nine other Cobb County schools were asked to respond to the same questionnaire. A total of 415 persons responded to the questionnaire which asked each person to rank, on a Likert Scale of one to five, thirty-eight goals of an English curriculum.

The results of each questionnaire were prepared for computer analysis. The chi-square (x) test, which compared each group's response with each other group on each item, resulted in 570 separate chi-square values, of which 45 were significant at the .05 level, and 106 were significant at the .01 level.

Of the four areas of the English included in the questionnaire (writing, reading, speaking, and literature), there was more significant disagreement in the area of writing. Thirteen rankings were significant at the 105 level and thirty-nine were significant at the .01 level. Of the six groups who responded, English teachers and freshmen students disagreed most with each other. Out of thirty-eight goals, they disagreed significantly on twenty-eight, six at the .05 level and twenty-two significant at the .01 level. The least disagreement occurred between senior parents and freshmen parents, who disagreed significantly only two times on the thirty-eight goals. Out of 190 possible interactions with the five other groups, the English teachers disagreed significantly ninety-two times or 48 percent of the time.

Only five of the thirty-eight selected goals received a five rank (the highest rank) from the majority (51 percent) of each of the six groups. None of the selected goals in literature received a high rank-

ing from the majority of any group except the English teachers. An English curriculum designed as a result of the five rankings of the majority of the six groups would contain only the following goals: writing correct English sentences, using appropriate grammar, comprehending what is read, expressing ideas, clearly, and listening to and respecting the other person's point of view.

Since much statistically significant disagreement occurs among the groups who responded to the questionnaire, this researcher recommends that subsequent revision of the English curriculum and its goals include input from teachers, students, parents, and administrators. For such revision, local school committees could be established to make recommendations for updating and improving the English curriculum.

Nowlin, Phyllis R. (Specialist in Education, Elementary Education, March, 1977)

GINN READING 360 AS A CRITERION-REFERENCED MEASURE IN PREDICTING READING ACHIEVEMENT ON THE NORM-REFERENCED IOWA TESTS OF BASIC SKILLS

This was an attempt to gather data which would cause those concerned to discover whether the basal reading series used at H. A. Jones Elementary School in Bremen, Georgia, is a predictor of the results on the ITBS which is given at the beginning of the fourth grade each year.

The data collected showed a significant difference between both the vocabulary and the reading means on the ITBS as compared with the reading level placement in Ginn Reading 360. The data failed to show significant differences between the mean reading level placement in Ginn Reading 360 as compared with both the spelling and total language means on the ITBS. In all four areas tested (vocabulary, reading, spelling, and total language), the results of the Pearson Product Moment Correlation showed positive correlations at the .001 level of significance.

The data partially supports the idea that the level of performance in the Ginn Reading 360 program is a predictor of the outcome of the ITBS for beginning fourth graders at H. A. Jones Elementary School in Bremen, Georgia. Due to limitations in the study, the outcomes are inconclusive.

In light of the related research, it is recommended that faculty and administration study the ramifications connected with the Ginn Reading 360 program with the idea of improvement in mind. It is further recommended that special attention be given to the related research in order to determine what kinds of tests seem to be most

needed and beneficial to H. A. Jones Elementary School. Advantages and disadvantages of the criterion-referenced and norm-referenced tests should be studied in depth.

Pedro, Nicholas J. (Specialist in Education, Administration and Supervision, June, 1977)

ANALYSIS AND RECOMMENDATIONS CONCERNING THE ESTABLISHMENT AND CONTINUING ADMINISTRATIVE PROCESSES OF A COMMUNITY SCHOOLS PROGRAM

The purpose of this study was to analyze and make recommendations concerning the establishment and continuing administrative process of a community schools program. A primary concern was to determine the most efficient method of publicizing programs within the Lindley Community School Cluster.

A questionnaire was constructed through the joint efforts of the nine community school directors and the community schools coordinator of Cobb County, Georgia. This questionnaire asked parents to indicate those kinds of activities they and their families would like to participate in. The items were listed in three broad areas of interest: Adult Enrichment, Hobbies and Recreation, and Family Interest. The questionnaire also asked for other information on the characteristics of the participant.

The initial course offerings were established through an evaluation of the total checks in areas of interest. Brochures listing course offerings were distributed throughout the Cobb County, Georgia area.

A second questionnaire was compiled through the joint efforts of the nine community school directors and the community schools coordinator to be distributed during the quarter to aid in determining the relative effectiveness of the various publicity programs. This questionnaire asked for information about the characteristics of the participants, their reasons for enrolling in the community school programs, and questions concerning how they received information about the community school program.

It was determined that the various elements of the publicity program were about equal in total effectiveness. It was also determined that the continuing administrative processes of a community school program must be continually analyzed in order to produce the most effective means of administering a community schooll program.

Peek, Samuel D. (Specialist in Education, Administration and Supervision, March, 1977)

EFFECTS OF RETENTION ON ACHIEVEMENT AND ATTITUDE

This study was concerned with the effects of retention on achievement rate and attitude toward school of tenth, eleventh, and twelfth grade students enrolled at Calhoun High School during the 1976-77 school year. These students had attended elementary schools in Gordon County and Calhoun City School Systems. The percentage attending each system was seventy-three and twenty-seven percent respectively. Forty of these students had been retained once during the primary grades and forty students had never been retained.

To accomplish this purpose, related literature was reviewed to provide a background of understanding. Standardized test scores were compared to determine the achievement rate of students before and after retention. A student survey was also conducted to determine the attitudes of both groups of students toward school.

Many educational researchers, having studied student retention, pointed out that school achievement rate for promoted low achieving students was better than the school achievement rate of low achieving students that had been retained. They also indicated that promotion provided students with a basis for positive attitudes toward school while retention provided students with a basis for negative attitudes toward school.

It was discovered in this study that a grade equivalent of one and two-tenths percent annual increase in achievement rate was made by students that had been retained once in the primary grades. It was uncertian what teachers expected in achievement rate increase for students. However, a grade equivalent of one and two-tenths percent achievement rate increase seemed to be a very small gain for an extra year spent in a primary grade.

The student attitude survey revealed that retained students had seven and four-tenths percent more negative attitudes toward school than promoted students. Only in one area of the entire survey did promoted students demonstrate more negative attitudes than retained students. When teachers practiced unprofessional behavior, promoted students gave a slightly greater negative response to their conduct than retained students.

Purdy, Phyllis B.W. (Specialist in Education, Elementary Education, March, 1977)

A COMPARISON OF THIRD GRADE CHILDREN WHO HAVE TRAVELED WITH THOSE WHO HAVE LIVED IN GORDON COUNTY AND NOT TRAVELED AS REGARDS TO THE ACQUIRED UNDERSTANDING OF GEOGRAPHY

This experimental research design was undertaken to determine if travel has a significant bearing on the geographic understanding of the third grade student.

For the purpose of this study, all third grade students at Eastside School, Calhoun, Georgia, were tested and subjects chosen for inclusion in the study on the basis of travel and non-travel.

Subjects selected were:

1. Thirteen third grade students who had always lived in Gordon County, and not traveled outside of the state of Georgia in the past two years.
2. Sixty-nine third grade students who had made limited trips to Alabama, Florida, and/or Tennessee in the past two years.
3. Twenty-seven third grade students who had not always lived in Gordon County and who had traveled beyond the states of Alabama, Florida, and Tennessee in the past two years.

The hypotheses were constructed to test the total groups and the groups by sex.

The Analysis of Variance and Duncan's Multiple Range Test were used. A significance level of .05 was established. Results for the total group showed a significant difference with an F ratio of 4.238 in favor of the travel group. There was a significant difference with an F ratio of 3.362 in favor of the girls who had traveled. There was no significant difference among the boys in the areas of geographic knowledge.

Rushing, Jimmy E. (Specialist in Education, Guidance and Counseling, June, 1977)

DEVELOPING AND EVALUATING AN AUDIO VISUAL ORIENTATION TO GUIDANCE SERVICES PROGRAM FOR ENTERING EIGHTH GRADE STUDENTS AT LAFAYETTE HIGH SCHOOL

An audio visual program designed to orient entering eighth graders to the guidance services was developed for use at LaFayette High School. Since there was no orientation program in use, the program

was informational in nature. All students in the eighth grade participated, with twenty-six being randomly chosen to serve as the sample. An information test was developed and administered before and after the program. The mean gain for the sample was 4.27. The post-test versus pre-test results were significant at the .01 level. It was concluded that the audio visual orientation program was effective and should become a part of orientation for all entering eighth grade students.

Seckinger, Paul H. (Specialist in Education, Guidance and Counseling, March, 1977)

IMPLEMENTATION OF CAREER EDUCATION AS AN INNOVATION IN CURRICULUM DEVELOPMENT

This study sought to determine the effects of infusing occupational information into a Law Education class at Morrow Senior High School, Morrow, Georgia. Two Law Education classes and one social studies class containing students who were not presently nor ever had been enrolled in Law Education were used in the study. The instruments used were the *Attitude Scale* and the *Knowing About Jobs* subsection of the *Career Maturity Profile* and an objective teacher-made test.

Data were analyzed by a standard statistical procedure using the t-test. The first hypothesis, there will be no significant difference in attitude change in the experimental group, was rejected with a t-value of 2.07 which is significant at the .05 level. Students' attitudes were improved when occupational information was included in the curriculum. The second hypothesis, there will be no significant difference in attitudes in the control group, was accepted with a t-value of 1.08. The third hypothesis, there will be no significant difference in attitude change in the second control groupp, was accepted with a t-value of .30.

Smith, Billy G. (Specialist in Education, Administration and Supervision, March, 1977)

DEVELOPING A MODEL FOR EVALUATING THE EFFECTIVENESS OF TITLE I READING PROGRAMS

This study was concerned with the development of a model to be utilized in evaluating the Title I Compensatory Education Program in Gordon County Schools. To accomplish this end, recent relative literature was reviewed to provide a rationale for developing the

model. The developed model consists of five phases: (a) assessment of the environment, (b) resource evaluation, (c) process evaluation, (d) product evaluation, and (e) dissemination of information.

Smith, Phillip B. (Specialist in Education, Elementary Education, March, 19777)

A COMPARISON OF TWO METHODS OF TEACHING FIFTH GRADE SCIENCE

A study of gains in achievement of two groups of fifth grade students was conducted in order to compare two methods of instruction. children in group A received traditional method of instruction. Children in group B received an individualized method of instruction. There were twenty-eight students in the study.

The null hypothesis was tested to determine if there existed any significant difference between the two groups. The t-test was used to test the hypothesis. There was found to be no significant difference; therefore, the null hypothesis was not rejected.

Recommendations for further study were included since a larger group over a longer period of time may have produced different results.

Stiles, Pat T. (Specialist in Education, Guidance and Counseling, June, 1977)

PRE-SCHOOL ASSESSMENT USING A CONDENSED VERSION OF THE GESELL DEVELOPMENTAL EXAMINATION TESTS

In May, 1976, twenty children from a public kindergarten were tested using the *Gesell Developmental Examination Tests,* to see if at least one of the subtests correlated significantly at the .05 level with the overall GDET. This would enable school counselors or teachers to administer a shorter version of the GDET, yet obtain the same needed information about each child tested.

The total score of each subtest was compared with the overall total of the test. Pearson Product-Moment and Corrected Correlation were used to compute the correlation coefficients.

Three subtests were found to be significant at the desired level. It was suggested, however, that the largest correlated subtest be used because of ease of administering and scoring.

Walker, Wallace G. (Specialist in Education, Administration and Supervision, March, 1977)

REASONS PARENTS PAY TUITION TO SEND CHILDREN TO CITY SCHOOL SYSTEMS RATHER THAN COUNTY SCHOOL SYSTEMS IN THREE SMALL GEORGIA COUNTIES

The purpose of this study was to determine the reasons parents pay tuition to send their children to city schools rather than county schools in three small Georgia counties. The second aspect of the study was to embed the findings in a Bayesian Enrollment Projection model.

A parent questionnaire was constructed from information obtained in interviews with the superintendents of the Bremen, Carrollton, Cartersville and Dalton School Systems and randomly selected county parents who send their children to the Carrollton City School System. This questionnaire asked parents to rank the items according to their importance in the parents' decision to pay tuition to send their child to a city school system. The items to be ranked included academic program, career development program, faculty and administration, extra-curricular activities, facilities, social climate, convenience, previous attendance, lunch program and public relations program. The questionnaire also asked for other information to draw information on the characteristics of the tuition-paying parents.

The academic program received top ranking by all the systems' parents. Academics was followed by an overall second ranking of staff and administration. Bremen parents ranked previous attendance and convenience second and third. Bremen differed significantly in other areas of the questionnaire such as having a higher percentage of parents with a lower than high school education and having fewer parents living further than four and one-half miles from the city school. The findings of this study showed Bremen to be unique. This uniqueness was probably a result of this being the first year for tuition at Bremen; whereas, Cartersville and Dalton have practiced this for several years.

The variable identified as being most useful for embedding in the Bayesian Enrollment Projection was distance from home to city school. This was the most identifiable information in Bremen. It was determined that the 325 non-resident students residing within four and one-half miles of the city school comprised 11.48 per cent of the population of this area. This percentage figure was the basis for the first variable in the projection model. The remaining twenty-nine non-resident students comprised 0.3 per cent of the remainder of Haralson County's population. This percentage figure was entered as

the second variable concerning tuition-paying stude ts.

The revised projection model based on the information obtained from the questionnarie supplied a much more accurate total population than the original projection. The distribution for grade level was, however, significantly different from the actual enrollment. Further study is warranted in this area.

Warner, Emory D. (Specialist in Education, Administration and Supervision, March, 1977)

DEVELOPMENT OF AN INSTRUMENT TO EVALUATE EFFECTIVENESS OF CAREER/VOCATIONAL TEACHERS

The study was conducted for the purpose of developing an evaluative instrument to determine the effectiveness of career/vocational teachers in the Polk School District. The selection of competency criteria for the development of the evaluative instrument was made by surveying career and vocational students, using the critical incident method of data collection. A random sample of 200 students, in grades 8-12, were asked to think of the one most effective career or vocational education teacher with whom they had been closely associated recently. Each student was asked to name the most recent thing the teacher did which was noteworthy and, thus, was perceived by the student as, indeed, making this an effective teacher.

The data gathered from the critical incident survey was the most crucial factor in designing the evaluative instrument. The teaching criteria or competencies suggested in the students' responses were combined into a testing instrument of twenty-five items designed to measure the process approach to effective teaching, as perceived by the students. No attempt was made to include such factors as the teacher's age, sex, experience, or race as a part of the instrument. Each statement on the instrument was accompanied by a scale ranging from 5 (way above average) to 1 (way below average). The instrument was then administered to two hundred students who were asked to evaluate their career or vocational education teacher. Four career/vocational teachers were involved in this study.

Based on the analysis of the data collected, it appears that students, rather consistently, want as a teacher a friendly person who tells them what they do wrong, is fair, knows subject matter he is teaching, is concerned about all students, and understands each individual. Three of the four teachers evaluated scored well with the students in these areas.

Statistical analysis of the evaluative instrument confirmed it to be reliable. Face validity based on what students perceive to be effective teaching was also achieved.

Waters, Billie Patton (Specialist in Education, Early Childhood Education, March, 1977)

A STUDY OF THE RELATIONSHIP BETWEEN THE SOCIO-ECONOMIC STATUS OF FIRST GRADE CHILDREN AND THEIR SCORES ON THE METROPOLITAN READINESS TEST

A study was conducted to determine if the socio-economic status of first grade children does make a difference in scores on the Metropolitan Readiness Test. All first grade children enrolled in the LaGrange Public Schools were administered the Metropolitan Readiness Test during the third week of the school term. The occupation of the head of the household determined each child's socio-economic status.

The hypothesis tested stated that first grade children from middle socio-economic backgrounds would make higher scores on the Metropolitan Readiness Test than children of families from the lower socio-economic level. The mean test was used to compare the scores of the children from the two socio-economic levels. Results showed that children in the middle socio-economic level did make higher scores on the test.

A recommendation was made for further study into socio-economic factors that lead to higher test scores.

Whatley, Edna E. (Specialist in Education, Business Education, March, 1977)

A STUDY TO DETERMINE TASKS PERFORMED BY THE LEGAL OFFICE WORKER IN LAW FIRMS IN THE NORTHWEST GEORGIA AREA SERVED BY COOSA VALLEY VOCATIONAL TECHNICAL SCHOOL

The purpose of this study was to determine the tasks that are performed by the legal office worker in law firms located in the Northwest Georgia area served by the Coosa Valley Vocational Technical School. Subproblems were: (1) to determine what tasks were being taught in the business education curriculum at the vocational technical school; (2) to determine if other vocational schools in Georgia were providing training for the legal office worker; and (3) to determine the necessary changes in the present curriculum for the implementation of a specialized training program for the legal office worker.

A questionnaire was used to collect the data from the office workers. This instrument included both a personal data section and a task checklist to identify job performance. The questionnaire requested

the job title, the number of years employed in a law firm and/or other offices, the educational background of the respondent, interest in further training in either a day or an evening program, and preference of courses.

A separate questionnaire was sent to the twenty-nine vocational technical schools in Georgia. This questionnaire inquired if course options were offered for training the legal office worker and requested curriculum information including specific course titles and the length of the program.

The task checklist was divided into twelve duty categories as suggested by an occupational performance survey conducted by Ohio State University and included a total of 180 selected task statements.

A survey form and a cover letter were mailed to 127 individual office workers. The mailing list was compiled by making telephone calls to law firms listed in five telephone directories of cities served by the Coosa Valley Vocational Technical School. A return of 77 percent was received from the survey. Of the 98 responses, 94 were valid for use in the study.

The Data Processing Technology Department at Coosa Valley Vocational Technical School cooperated with this study in the tabulation of the data. The assistance from this department insured a more efficient summary of the data, and a complete print-out of information for desired tables was obtained.

The analysis and tabulation of data involved:

1. The job titles of legal office workers in Northwest Georgia as identified by the questionnaire
2. A comparison of length of employment in a law firm, and the length of previous employment in other types of offices, for secretaries and legal secretaries
3. A comparison of job titles and educational background of legal office worker
4. The number of office workers indicating interest in further training and the legal specialty courses desired
5. The tasks most frequently performed by legal office workers
6. A comparison of tasks performed by the legal secretary and the secretary in law firms
7. The legal course options offered by the vocational technical schools in Georgia
8. The tasks on the checklist which are presently included in the business education curriculum at the Coosa Valley Vocational Technical School

The following conclusions were reached:

The study pointed out that the majority of the tasks performed by the legal office workers are currently being taught in the business education program at thee vocational technical school.

The responses show that the majority of the legal secretaries and the secretaries perform basically the same tasks.

The legal office workers have obtained job experience and expertise through previous employment.

A high school educational background combined with legal office experience qualifies a person for the job responsibilities of a legal secretary or a secretary in a law firm.

The majority of the tasks included in the checklist were indicated as being performed by the legal office workers.

A sufficient number of presently employed legal office workers were interested in further training to improve their skills; thus, the inclusion of legal courses in the evening business education program is warranted.

An increased interest in future demands for courses to train the legal office worker is developing throughout Georgia.

The recommendations of this study are:

1. That further study of the tasks performed by the majority of legal office workers be made and compared with the tasks being taught
2. That a course be included in the evening program and an additional course be added each quarter as community interest develops and appropriate teaching media are developed
3. That students completing the fourth quarter of their business education program at Coosa Valley Tech check the task checklist according to those tasks in which they have received instruction and identify the course in which the instruction was received.

Wheeler, Frank D. (MA, Psychology, June, 1977)

THE DEVELOPMENTAL PROCESS OF CONSCIOUSNESS IN CREATIVITY

This thesis is a psychological search for a meaningful humanistic relationship connecting the developmental process of consciousness to creativity.

Method of development is: selected readings in the fields of Psychology, Anthropology, Philosophy, Theology, and Sociology; selected studies in Existentialism, Zen, Phenomenology, and Perspectivity; special readings from the Wisdom of Confucius, and one selected study from the mental efficiency state series of Youtomo-Tashi.

Personal experience was derived from: seven years military service (Air-borne Ranger Command, U.S. Army); three years training at Sun Coast Osteopathic Hospital, Largo, Florida, in fields of Radiology and Osteopathic Medicine; six months observation and study of

Black Magic and Witchcraft as a protestant missionary to the West Indies; two years work as psychiatric assistant, psychology department, Georgia Regional Hospital, Atlanta, Georgia, developing behavior modification techniques and related psychiatric procedures; two years work with psychiatric department of Floyd General Hospital, Rome, Georgia; and assisted in the development of home for Mentally Retarded.

The meaningful humanistic relationship in psychology today is changing the concept of mental health. It places emphases on the whole person rather than his part-function. I feel that the humanistic-existential approach is becoming increasingly prominent in psychology. It is allowing new avenues to open whereby daily living experiences are increasingly developing the potential for creative being as opposed to behavioral classifications.

Wood, Jan M. (MA, Psychology, June, 1977)

THE HUMANIZATION OF THE HOME

"With or without a conscious philosophy or explicit recognition of the fact, designers are shaping people as well as buildings." (Sommer, 1969: vii)

This paper shall be a grouping of explorations dedicated to the purpose of the eventual establishment of an architectural psychology with an emphasis on the humanization of dwelling design, both as a form and a process. The thread which holds these explorations together is tenuous. This thesis is *not* presented as an integrated whole but as a compendium of ideas which are directed toward the same end. This is not a rationalization for chaos but a description of a collection of explorations each seeking an endpoint, which is only partially articulatable.

Contrary to the customary practice of isolating an obscure bit of knowledge and developing it thoroughly with extreme attention to detail, I have taken a broad subject—the interface of housing and psychology—and have approached it from as many vantage points as I have found relevant. It is interesting to see how slum shacks can be emotionally satisfying, and how Colonial mansions fail to satisfy certain psychological needs. The fulfillment of the needs for safety and security in a house is seen in contrast to the fulfillment of needs for the actualization of the self through architectural design and handcrafted construction. I have sought to expand into the recesses of a psychological approach to domestic architectural design, rather than to isolate and illuminate a single bit of data through a research project. I have written this thesis in an attempt to fill a gap that still

looms large before me. That gap in human knowledge remains. However slight the accomplishment in objective terms, it has been no mean feat for me to have identified that gap and to have begun the lifelong process of filling it. Bruce Alsopp (1974:96-7) has described the parent chasm of my little gap as succintly as anyone:

> We need a new subject—architectural psychology—which is concerned with people's feelings in relation to their environment, the basis of their evolution, the importance of symbolism, meaning, home relationships, and continuity, their response to textures and cultures, the effects of massing, the problems of scale relationships, the sense of place, recognition symbols, family patterns, geriatric problems, the right size of buildings, the value of diversity and of employing different designers for adjacent buildings, the effects of thingking too big, of monotony and the imposition of so-called design values upon people, whether they like them or not, and the architectural causes of vandalism.

The fledging field of architectural psychology which is an offshoot of the growing field of environmental psychology, (which has its own professional journal) is doing most of its growing in relation to the urban setting, (I will cite studies of urban slums in Puerto Rico and Boston.) and to the architecture of the working environment which comes under the category of human engineering. From the little research being done in the area of the proper design of mental hospitals, much significant data has been recorded. But in the area of domestic architectural design, i.e., the design of homes, psychologists are still virtual strangers. It is for this reason that I have chosen this area of study. The fact that I have chosen a critical area for investigation helps to compensate for the fact that I have barely begun the process of applying psychology, especially humanistic psychology, to domestic architectural design.

The Humanization of the Home is an attempt at provoking interest in the humanistic quality of the spaces in which we dwell. It is also a naive effort toward a theoretical framework for ordering divergencies and contradictions in the exploratory data. If the sheer enormousness of the task has proven to be unrealistic, it has also been fruitful. A wide range of considerations is made available to the dweller to help put the dwelling experience in an alterable category. Not only does one get the feeling that something can be done about the form and process of dwelling, but that a simple change of attitude can effect positive, three dimensional, and, (I dare say) measurable changes. The Humanization of the Home offers a challenge and a promise—a challenge to transcend the mediocre in housing and a promise that a response to that challenge will bear fruit if undertaken in the right spirit. It is based on the conviction that the design of the structure and experience of the dwelling is also the design and creation of oneself.

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Invitational One Man Show: Fall River Gallery, Fall River, Massachusetts, 1974.

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Prize Winning Exhibition: Second prize in sculpture, Sixteenth Annual Fall River Exhibit, Fall River, Massachusetts, 1973.

Exhibitions: Marianists of USA, San Antonio, Texas, 1957; Festival of the Lively Arts, Cincinnati, Ohio, 1964; Ohio State Fair Professional Artists, Columbus, Ohio, 1964; San Giuseppe Studios, Cincinnati, Ohio, 1965; Liturgical Arts Exhibit, Rochester, New York, 1970; Gardens Art Festival 9, Callaway Gardens, Georgia, 1972; Georgia Museum of Art, Athens, Georgia, 1972; A.I.A. Liturgical Arts Exhibit, Atlanta, Georgia, 1972; Georgia Artists 2, High Museum, Atlanta, Georgia, 1972; Chiaha Annual Exhibit, Rome, Georgia, 1976; Quinlan Art Center, Gainesville, Georgia, 1976.

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THE COUNTER-REVOLUTION IN LINGUISTICS: A BEHAVIORAL VIEW

by DAVID RYBACK*

The cognitivist-behaviorist counter-revolution against Chomskian linguistics has been in evidence for more than five years now. Although the Chomskian Revolution did much to revitalize linguistics, the pendulum is beginning to swing the other way as research in verbal learning theory, semantics and syntax point to gaps in the Chomskian structure. This paper presents a behaviorist's view of some of the points that Chomsky has put forth.

Lyons[1] sees Chomsky's primary contribution as the mathematical rigor and precision of his formalized properties. Hymes[2] sees Chomsky's primary contribution as his research on the formalization of linguistic theory and his views of psychological and philosophical issues of mind. This paper focuses more specifically on the duality of surface and deep structures in linguistic analysis and the duality of performance and competence.

At best the surface-deep duality is a confused one. Chomsky concedes that the surface structure of language may be learned behaviorally, but reserves for the underlying structure a kind of intrinsic, innate nature which comprises the universal aspects of language. How else, asks Chomsky, could infinite use be made of finite means?

For one thing, Chomsky's understanding of behavioral analysis is rather oversimplistic. His insistence on a "substantive" interpretation of behaviorism is difficult to comprehend unless by "substantive" Chomsky means to refer to the simplistic approach of John Watson's methodological behaviorism or to Skinner's laboratory-oriented approach.

More current behavioral approaches to language (what Staats[3] refers to as the third generation of learning theories) have no difficulty at all in explaining the infinite nature of a finite language system. Mediated generalization of semantic responses is the only concept needed to account for it. (More will be said about this later on.)

Nor should it be forgotten that in the applied area of prediction and control of language, behavioral approaches have far outshone any

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[1] T. Lyons, *Noam Chomsky*, New York: Viking Press, 1970, p. 43.

[2] D. Hymes. Review of *Noam Chomsky* by T. Lyons. *Language*, XLVIII, No. 2 (1972), p. 422.

[3] A.W. Staats, "Lingustic—mentalistic Theory Versus an Explanatory S-R Learning Theory of Language Development" in *The Autogeny of Grammar*, D.I. Slobin, editor, New York: Academic Press, 1971.

nativistic approaches. It was the behavioral approach that succeeded in teaching language skills to previously mute or echolalic schizophrenic and autistic children (Lovaas *et al.*[4]; Ryback[5]) not the nativistic approach. And it is the behaviorist who is providing our educational institutions with programs for alleviating reading problems (Staats *et al.*[6]).

But perhaps all this is merely surface. It is the underlying structure which is intrinsic, not the surface manifestation. Then let us focus on what Chomsky shows us to be the underlying structure of language. Chomsky's own example appears in the difference between the two following sentences which appear similar on the surface, but which Chomsky shows to have an underlying difference:

Ai. I persuaded a specialist to examine John.

Bi. I expected a specialist to examine John.

The transformation showing the underlying difference results in:

Aii. I persuaded John to be examined by a specialist.

Bii. I expected John to be examined by a specialist.

Chomsky's analysis is as follows:

Ai. Noun phrase—verb—noun phrase—sentence.
I — persuaded—a specialist—a specialist will examine John.

Aii. Noun phrase—verb—noun phrase—sentence
I — persuaded—John — a specialist will examine John.

Bi. Noun phrase—verb—sentence
I — expected—a specialist will examine John.

Bii. Noun phrase—verb—sentence
I — expected—a specialist will examine John.

Although linguistics can readily prove the validity of the underlying difference between A and B (Chen[7]), it is also possible to account for the difference by focusing on the verbal qualities of "persuaded" and "expected".

The affinity that certain verbs have for certain nouns as objects can perhaps be best exemplified by taking some examples from Mandarin. Although "jyau" means "teach", I teach would be "wo jyau shu" (literally, "I teach book(s)") and although "chr" means "eat", "I eat" would be "wo chr fan" (literally, "I eat rice"—"I eat a meal", implied).

These verb-object affinities are not found in similar intensity in English, but what should not be overlooked is that certain verbs do take

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[4] O. I. Lovaas, J. P. Berberich, B. F. Perloff, and B. Schaeffer, "Acquisition of Imitative Speech by Schizophrenic Children", *Science*, CLI (1966), 705-707.

[5] D. Ryback, "M&M's and Behavior Modification", *Journal of the Council for Exceptional Children*, XVI, No. 1 (1966), 3-7.

[6] A. W. Staats, K. A. Minke, W. Goodwin and T. Landeen, "Cognitive Behavior Modification: 'Motivated Learning' Reading Treatment with Subprofessional Therapy Technicians", *Behavior Research and Therapy*, V (1967), 283-299.

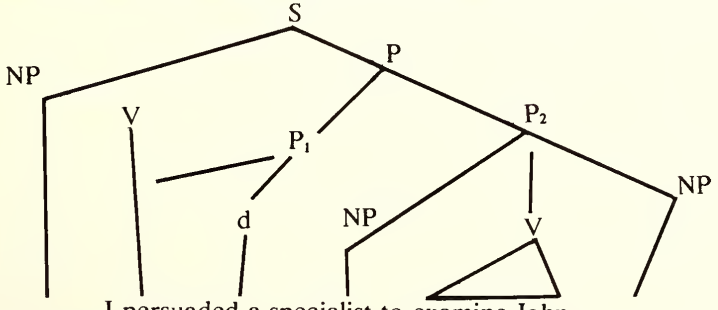
[7] H. Y. Chen, "A Transformational Analysis of Two English Sentences", *English Teaching Quarterly*, III, No. 3 (1971), 40-44.

particular kinds of objects. One does not say with any grammatical justification "I sang a table" unless "A Table" is the title of a song in which case one can correctly say "I sang 'A Table' ". The verb "to sing" takes as its object a song, melody, tune, *etc.*, *i.e.*, anything which is "singable". Similarly, "to persuade" and "to expect" take particular classes of objects. "To expect" takes as its object a particular state of being. Even when one says "I expect him", what is implied is: "I expect (the state of) him (being (somewhere))", or "I expect nothing" implies "I expect no (state of) thing (being)".

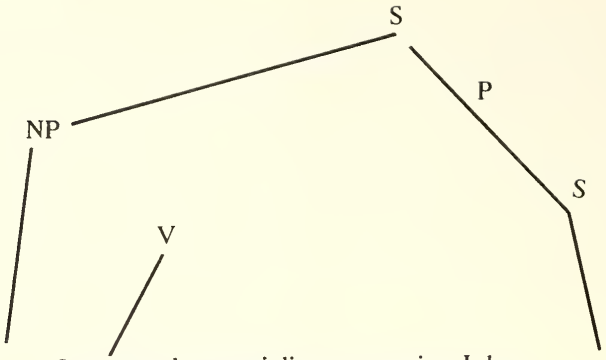
However, "to persuade" takes as its object something that is persuadable, *i.e.*, an agent, or, in Fillmore's terms,[8] a noun phrase in the agentive case of the typically animate perceived instigation of the action. Although Fillmore assigns the dative case to the object of "persuade", the argument is made here that inasmuch as the object of "persuade" is an agent capable of instigating action, the agentive case is more appropriate. Hence, we can say "We persuaded the Heavens (capable of some act)". Even where the object of "persuade" is not the instigator of the state of affairs being persuaded—*e.g.*, "We persuaded him that we were going." —the agent "him" is capable of the act of believing the state of affairs being persuaded. Hence, we have "We persuaded him (to believe) that we were going". There is no exception to this rule that "persuade" takes as its object an agent capable of acting, "to believe" being one of those acts.

Since the object of "persuade" (to which Fillmore assigns the dative case) is also affected by the persuasion as well as being the instigator of belief or action, a more comprehensive label for the case of the object of "persuade" would be "dagentive", subsuming the qualities of both case functions.

It can now be seen that the grammatical difference between A and B lies in the different case functions of the respective objects of "persuaded" and "expected". That this difference can be illustrated by the following diagrams demonstrates that the difference between the two statements is close to the surface structural level.



[8] C.J. Fillmore, "The Case for Case", in *Universals in Linguistic Theory*, E. Bach and R.T. Harms, editors, New York: Holt, Rinehart & Winston, 1968, p. 24.



I expected a specialist to examine John.

Case function resides in deeper structures. However, case function was used here only to demonstrate the difference which, once demonstrated, can easily be shown to exist at the surface level, since a surface structure analysis clearly shows the grammatical difference between the statements. (For differentiation between deep and surface structure analysis, see Fillmore, especially Diagrams 60-63.)[9]

Analysis of a predicate (P) into subcomponents (P_1 and P_2) is somewhat unconventional but merely indicates overlapping sentences of which the object of the first is the subject of the second, characterized by the "dagentive" case. Albeit this surface structural analysis is highly unconventional, it is presented here in the spirit of stimulating further thought with the ultimate hope of resolving basic differences on this issue.

Turning now to the competence-performance duality, let us begin with Chomsky's definition of "generative grammar":[10]

> By a 'generative grammar' I mean a description of the tacit competence of the speaker-hearer that underlies his actual performance in production and perception (understanding) of speech. A generative grammar, ideally, specifies a pairing of phonetic and semantic representations over an infinite range.

This would imply that generative grammar and competence are synonymously related and that both specify (underlie ? direct ? influence ?) the phonetic semantic pairing of the speaker-hearer. If Chomsky is attempting something akin to the learning-performance dichotomy, then we are doomed to speculate ad infinitum on the nature of competence, which could not be known to us for observation except through performance manifested. Like "learning", "competence" would have to be methodologically defined in stimulus terms only, never in response terms, and hence relegated to epistemology and forever banned from linguistics

[9] Fillmore, pp. 35-36.

[10] N. Chomsky, *Cartesian Linguistics*, New York: Harper & Row, 1966, p. 75.

(the study of verbal behavior). Performance is the behavioral manifestation of learning potential; is Chomsky's "performance" as well the behavioral manifestation of linguistic competence? If so, then why look for universals at the Platonic level which cannot be found in reality, since scientists deal exclusively with reality? The point is that postulations of universals with no basis in manifested reality are better left to the clergy than to scientifically-minded students of linguistics. And if Chomsky does not mean to differentiate competence and performance in this manner, then why would he insist that "we must isolate and study the system of linguistic competence that underlies behavior but that is not realized in any direct or simple way in behavior"?[11]

Chomsky defines "competence" as "the ability of the idealized speaker-hearer to associate sounds and meanings strictly in accordance with the rules of his language".[12] The insistence that competence is an innate characteristic is hardly compatible with this definition, especially so for anyone with experience in the teaching of language. There is nothing innate about the association between sounds and meanings, for example, either for the Chinese student learning English or for the English student learning Chinese.

Admittedly, there appears to be a critical age limit (about or before puberty) before which languages are more easily learned than later. And thus learning a second language in later years is not strictly comparable to acquiring native language. But it is still not determined whether this difference is due to maturational factors or to different learning environmental factors. Motivation appears to be a paramount factor and the motivation of a child needing to communicate with his elders and peers for satisfaction of his bodily survival needs and his basic psychological needs is much greater than that of the child learning metalanguage (*i.e.*, grammar) and vocabulary drills from a not-so-reinforcing textbook and classroom situation.

Furthermore, if competence is defined "in accordance with the rules of his languages", then what of the concepts that exist in some languages but not in others, *e.g.*, the seven names for snow in the language used by the Eskimos, the multiplicity of nouns in the Thai language which denote the various kinds of smiles, or the specification of older vs. younger siblings in the Chinese language? The terms "innate" and "universal" hardly seem applicable when one considers comparing isolating languages such as Chinese with flexional languages such as the Romance languages, or with agglutinative or polysynthetic languages such as Turkish or Kwakiutl which incorporate multiple concepts within single words. The internalizing of a system of universal rules for the acquisi-

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[11] N. Chomsky, *Language and Mind*, New York: Harcourt, Brace & World, 1968, p. 4.

[12] N. Chomsky, "The Formal Nature of Language", appendix to *Biological Foundations of Language*, E. Lenneberg, New York: Wiley, 1967, p. 398.

tion of these various languages seems to be an inaccurate description of language acquisition, yet this is precisely how Chomsky[13] describes it.

Beyond all this, Chomsky never seems to be able to make up his mind as to whether competence or generative grammar is a Platonic process which is not directly realized in behavior,[14] whether it provides the basis for actual use of language[15] or whether it interacts with psychological factors to determine language.[16] As Hymes has recently stated,[17]

> Chomsky has perhaps never been committed to any one way of warranting transformational deep structure and its significance for the human mind, but has from the beginning been committed to the reality of that structure and that relationship.

It should not be overlooked here that the arguments presented in this paper stem from a functionalist rather than a structuralist viewpoint, nor that psycholinguistics differs from linguistics proper along the very same line, *i.e.*, whereas most linguists are structuralists and primarily interested in observing R-R relationships in language behavior, psycholinguists, more functionally inclined, focus on S-R relationships or the independent variables by which language behaviors can be predicted and controlled. The difference is as great as that between theoretical and applied sceince. Hence, although the linguist's use of "deep level" concepts may be quite valid and justifiable within his own structural framework of language theory, it behooves the psycholinguist to communicate with his linguist colleagues to his viewpoint of his fellow's camp. It is assumed that each has much to contribute to the other, to the common benefit of the study of language.

In his recent review of Lyons' (1970) book on Chomsky, Hymes describes well the situation in which linguistics currently finds itself:[18]

> If linguistics eschews the sampling approach of many sciences, it has its own 'sampling' (sic) approach that tends to reproduce the difficulties of prescriptive grammar, even if the intentions are professional rather than social. If we let the clear cases, or the grammar, decide, we sever the result from any claim to account for the tacit knowledge of actual speakers; we put the entire significance claimed for grammar, as an explication of speakers' competence, into question... The study of language as human activity calls for ethnography as well as logic, and for a reconsideration of the foundational notions of linguistics, as to what is to be accounted for and how it is organized.

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[13] Chomsky, *Language and Mind*, p. 23.
[14] *Ibid.*, p. 4.
[15] N. Chomsky, *Aspects of the Theory of Syntax*, Cambridge, Massachusetts: MIT Press, 1965, p. 9.
[16] Chomsky, appendix to *Biological Foundations of Language*, E. Lenneberg, p. 398.
[17] Hymes, p. 422.
[18] Hymes, pp. 420-421.

Chomsky's popular review of Skinner's *Verbal Behavior* has stimulated many a behavioral psycholinguist to verbal response.[19] However, that Chomsky's view of behaviorism is somewhat oversimplistic becomes evident in his criticism of Skinner in which, for example, he describes the situation of an individual appreciating a beautiful painting. A verbal response of "beautiful" uttered loudly and frequently is compared with the same response murmured softly only once. Chomsky[20] maintains that Skinner's criteria for response strength (frequency and amplitude) fail here since the latter of the two possible responses indicates just as much appreciation as, if not more than, the former "beautiful" spoken often and loudly. What Chomsky conveniently overlooks here is the importance that behaviorists and other behavior scientists (not excluding clinical psychologists and psychiatrists) accord to latency in human verbal responses and, as well, to the concept of mediating verbal responses.

Chomsky[21] faults Skinner for indulging in a tautology in his concept of reinforcement in the law of conditioning. According to Skinner's law of conditioning, if the occurrence of an operant is followed by the presence of a reinforcer, the probability of response is increased. Since a reinforcer is defined as that stimulus which strengthens a response which it follows, then Chomsky concludes that learning is merely a change in response strength and that Skinner has added nothing new to the study of behavior. Skinner's point, which seems to be lost to Chomsky, is essentially that there are certain classes of stimuli which, for a given species, consistently increases the response strength of the responses they follow. We give the name "reinforcers" to these stimuli and by arranging these stimuli in contingent relationships with certain responses, we can predict and control behavior. To Skinner a knowledge of which stimuli are reinforcing for particular situations and of the functional relationship between relevant behaviors and appropriate stimuli make up the understanding of behavior. Hence we have prediction, control and at least a functional understanding of behavior. Is this contributing nothing to the study of behavior? The term "reinforcement" need not have explanatory force. It is merely the name given to the process by which behaviors become controllable through relationships with certain classes of stimuli.

Nonetheless, linguists have been highly justified in being critical of the behavioral approach to language study. Until quite recently, behaviorist theories of language have been severely limited and restricted in their approach. For example, learning theorists have explained language in

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[19] N. Chomsky. Review of *Verbal Behavior* by B. F. Skinner. *Language*, XXXV, No. 1 (1959), 26-58.

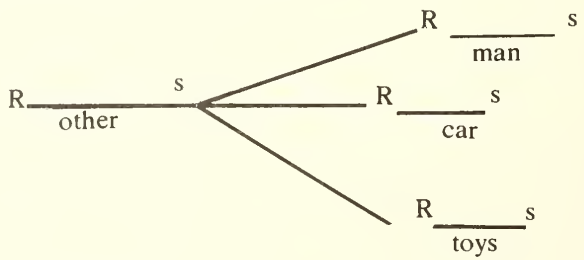
[20] *Ibid.*

[21] *Ibid.*

terms of operant conditioning alone,[22] semantics alone,[23] or serial and paired associate verbal learning alone.[24] As Staats says:[25]

> Obviously, complex language behaviors cannot be accounted for solely on the basis of word associations, or word meanings, or the operant conditioning of speech. (p. 104)
>
> The fact is, in summary, the basic learning theory employed must include clear presentation of the principles of both classical and instrumental conditioning, as well as *the manner in which the principles interact.* (p. 105)
>
> That is, although the conditioning principles themselves are simple, the S-R mechanisms that are formed in real life consist of exceedingly complex arrays and constellations of functionally connected stimulus response events. (p. 106)
>
> ...Language consists of reponses of great variety and complexity... (p. 108)

Staats goes on to explain how behavioral principles account for complexity and infinite variation in language. Each word can be seen not only as a verbal response in itself but also as simultaneously providing stimulus cues for generating single word verbal responses to which the first word is associated. Each word can of course be associated with a hierarchy of other words. For example, the word "other" can provide stimulus cues for the responses "man", "car" or "toys".



In Staats' own words:

> It should also be indicated in the above example that other word responses would be learned in combination with each other and would acquire tendencies to elicit each other in certain orders. That is, not only would "give" come to elicit "me", but also "him" and "her", and so on. It is suggested that at each point in the response sequence there would be a hierarchy of responses which would tend to be elicited, not just one single response, and these hierarchies could vary in the

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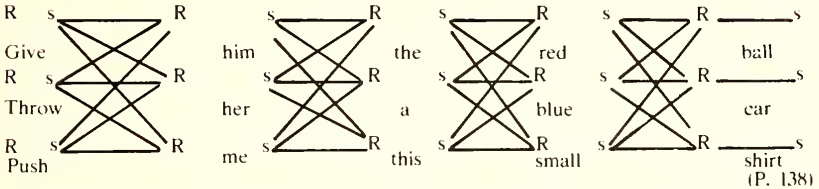
[22] B. F. Skinner, *Verbal Behavior,* New York: Appleton-Century-Crofts, 1957.
[23] C. E. Osgood, G. T. Suci and P. H. Tannenbaum, *The Measurement of Meaning,* Urbana, Illinois: University of Illinois Press, 1957.
[24] L. Postman and L. Rau, "Retention as a Function of the Method of Measurement", *University of California Publications in Psychology,* VIII, No. 3 (1957).
[25] Staats, in *The Autogeny of Grammar,* D. I. SLobin, editor.

numbers of responses included, with some, as in the case of count nouns, being very large. An example of these sequences of hierarchies of responses which would include the sentence in the example might be as follows.



One final point: Chomsky makes much of the universal and innate aspects of language. He and his supporters ask why it is that only humans use language and not other species or why there is such a similar range of phonemes in the various languages. They also ask why infants in various cultures learn language at similar stages of development and why language is always vocal. The answers to these questions, they maintain, point to the innate and universal character of language as opposed to the *tabula rasa* viewpoint of the behaviorists.

There is merely one fault in this line of reasoning and that is this: to isolate a universal character of verbal behavior, it is first necessary to point to alternative possibilities only one of which is the universal characteristic. Given the anatomical and physiological features of the human being, could any mode other than vocal be as effective a means of communication as is speech, or is it surprising that the range of phonemes corresponds to the anatomical features of the vocal apparatus? Do not animals (not to mention insects—such as the dancing language of the bees and the chemical language of ants) other than man have language (see Gardner & Gardner;[26] and Premack[27,28]). What is universal is that people speak and what they speak is called "language".

Each language has its own set of rules and this is called "grammar". And this, Chomsky notwithstanding, is exactly where universals end. As Lyons[29] maintains, every grammar requires such categories as noun, predicator and sentence. Since we live in a physical universe and since we are limited to five sense modalities, the information upon which we act normally consists of objects in space to which one of two possibilities occurs: the objects change their position in a 3-dimensional space and/or objects interact in such a way as to change the chemical or physi-

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[26] R. A. Gardner and B. T. Gardner, "Teaching Sign Language to a Chimpanzee", *Science*, CLXV (1969), 664-672.

[27] D. Premack, "A Functional Analysis of Language", paper read at the American Psychological Association, Washington, D.C., 1969.

[28] D. Premack, "The Education of Sarah", *Psychology Today*, IV, No. 4 (1970), 54-58.

[29] T. Lyons, "Toward a 'Notational Theory' of the 'Parts of Speech' ", *Journal of Linguistics*, II (1966), 209-236.

cal nature of one or more of the objects. Objects are called "nouns" and changes in objects, whether positional or material, are called "verbs". This is why we see language as comprised primarily of nouns, verbs and their modifiers, not because of some underlying grammatical universals. The universal is physical rather than linguistic. Across the various cultures in our world, man is limited to objects and their changes. With the evolution of man's language, nouns could take on abstract qualities, and descriptions of man's own actions became subtle descriptions of attitude and disposition. But the basic units remained nouns, verbs and their modifiers.

Perhaps it was because of a universal in human behavior that Chomsky's nativist approach found such ready acceptance—the universal need in man to see himself as apart from and above the physical realm of causal determinacy—an assumption which behaviorists readily accept. There is no doubt that man is unique among the creatures of the world, but his dignity should be based on his own character, not on that of the rules of grammar.

STORM IMAGERY IN *TROILUS AND CRISEYDE*

by FRANK SADLER*

Men sen alday, and reden ek in stories,
That after sharpe shoures ben victories.
—GEOFFREY CHAUCER
from *Troilus and Criseyde*

This quotation from Book III of Chaucer's *Troilus and Criseyde* suggests that the function of the "storm imagery" of the first stanza of Book II not only foreshadows the "surrender" of Criseyde but also serves a more important function in terms of the overall meaning of the poem. Translated into contemporary English, we are told by Chaucer "that storms are presages of victories which are vouched for by the authorities." Essentially, then, the function of the "storm imagery" in the *Troilus* serves the purpose of foreshadowing three types of victories. First, as Walter Clyde Curry notes in "Destiny in *Troilus and Criseyde*," Chaucer conceived "the brilliant idea of throwing the lamentable history of the two lovers against the dark background of the Trojan war, which has already progressed nearly ten bloody years and which is on the point of ending with the fall of the great city." The background of the Trojan war, which is never far behind the surface narration of the poem, then, not only acts as a framing device for the tragedy of the two lovers but foreshadows the ultimate victory of the Greeks and the imminent destruction of Troy itself. In this sense, the "storm imagery" is linked to the "clouds" of war which, in turn, are closely allied to Chaucer's point of view. Second, the "storm imagery" is closely related to the entire physical apparatus of Nature as it applies not only to the heavens but with respect to the concepts of Destiny and Fortune as they are worked out in the poem. And, finally, as previously mentioned, the "storm imagery" foreshadows the "surrender" of Criseyde and the ultimate betrayal and death of Troilus. There is, perhaps, a fourth victory though admittedly it is rather tenuous. This fourth victory is directly concerned with the closing remarks Chaucer makes with regard to the love of Christ and seems to suggest that the ultimate victory is a spiritual or religious one.

Throughout the *Troilus* Chaucer's references to "storm imagery" are subtle. Early in Book I Troilus comments

Love, ayeins the which whoso defeneth
Hymselven most, hym alderlest avaylleth,
With disespeyr so sorwfulli me offendeth,
That streight unto the deth myn herte dailleth.

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Troilus, having fallen in love with Criseyde, seems to recognize here his destiny. The imagery of the "heart" as a ship that sails on a straight course to death clearly points forward to the storm imagery of the second book of the poem. Preceeding Troilus' comment by some eleven stanzas, he has already informed us of his desire to "aryved in the port/Of death, to which my sorwe wol me lede," since "cold in love towardes the/Thi lady [Criseyde] is, as frost in wynter moone,/And thow fordon, as snow in fire is soone." The point, of course, is clear. As William George Dodd in "The System of Courtly Love" points out "Love, to met the requirements of the courtly system, must not be too easily obtained." Though we understand from the beginning of the poem that Troilus will be successful in obtaining Criseyde's love, Chaucer informs us

> and thus Fortune on lofte
> And under eft, gan hem to whielen bothe
> Aftir hir course, ay whil that thei were wrothe.

In a very specific sense, then, with respect to the context in which "storm imagery" or the metaphor of the ship appears, this imagery is linked to the wheel of Fortune in terms of whether she "wears a smile" or "now a frown." The secrecy under which Troilus must labor to fulfill the requirements of the courtly lover, indeed, if he is to love at all, weighs heavy on him. Pardarus suggests that

> Now loke that atempre be thi bridel,
> And for the beste ay suffre to the tyde,. . .

and,

> And sith that God of Love hath the bistowed
> In place digne unto thi worthinesse,
> Stond faste, for to good port hastow rowed;. . .

Pandarus' advice is accepted by Troilus who lays his "lif,. . .[his] deth, hol in thyn [Pandarus'] hond." Though Chaucer does not provide us with a great number of references or allusions to the imagery of storms or the sea in Book I (and we have given all of them) it is not simply a matter of quantity but rather the way in which the few he does give us are used. In terms of the literal narrative these references or metaphors are simply given as referents for expressing concretely an abstract ideal of the conventions of courtly love, etc. Pandarus or Troilus are unaware, beyond the immediacy of their context, what they suggest in terms of the larger structure of the poem, though it is clear to the reader that these images presage significant events in the poem. Consequently, Book I establishes the "double sorwe of Troilus to tellen," quickly sets the controlling structural metaphor of the poem in terms of the background of the Trojan war, introduces Calchas the astrologer and augurer, provides the opportunity for Troilus to fall in love, and suggests that the Fortune and Destiny of not only Troy but Troilus are somehow bound up with the movement of the stars.

In Book II, however, these various themes of the poem accrete in Chaucer's "Introduction." We are made to feel that the predominance of the "storm imagery"in the first stanza is somehow tied into or linked with the internal developments that are taking place in terms of the literal narrative. Further, the *essential* requirement of courtly love has been introduced and briefly dwelt upon, that is, as Dodd suggests "Courtly love is sensual." Troilus has fallen in love as the result of "a passion arising from the contemplation of beauty in the opposite sex. . . [which] culminat(es) in the gratification of physical desires thus awakened." Troilus' "gratification," of course, does not come until the dawn-poem or aube in Book III. Nevertheless, the seeds of Troilus' predicament have been well laid. The requirements which Troilus finds himself laboring under in terms of courtly love are, therefore, I would suggest, symbolized by the imagery of the first stanza of Book II. Chaucer notes that

> Owt of thise blake wawes for to saylle,
> O wynd, o wynd, the weder gynneth clere;
> For in this see the boot hath swych travaylle,
> Of my connyng, that unneth I it steere.
> This see clepe I the tempestous matere
> Of disespeir that Troilus was inne;
> But now of hope the dalendes bygynne.

Though this passage, in the immediacy of its context, refers specifically to Chaucer's poetic problems—his skill as poet will hardly avail to save the boat that he sails in this wild sea, nevertheless, the beginning of the first day of the month (the "kalendes") will bring hope. There is, perhaps, no other stanza in the *Troilus* which is so forceful in the use of its imagery. The stanza clearly suggests a double function. It serves as a device by which Chaucer's problems as an artist are given expression through the use of a series or cluster of images based on "the weder gynneth clere" (the breaking tempests clear) and, at the same time, suggests that Troilus as a prisoner bound by the system of courtly love will find relief or hope for the sensual consummation of his love with Criseyde. Troilus' constraint, since he is bound to maintain secrecy by his code, then, we are suggesting, is symbolized by the "weder," or, more properly as we have referred to it here, by "storm imagery." In other words, Troilus' passions rise and fall in the poem as the nature of the weather changes. Troilus' "disespeir" is characterized by Chaucer as being a troubled sea—black. But, as the "weder gynneth clere," so too, Troilus' "disespeir" will change. In order for this change to take place we are made to feel, as Curry suggests, that "the wandering or erratic stars, especially Venus and Luna, [must] exert a powerful influence upon the personal fortunes of Troilus and Criseyde." Curry continues by stating

> . . .before Pandarus sets out to woo his niece for Troilus, he deems it necessary to set up a figure of the heavens in order to learn whether

the Moon is favorable to such a journey; and having determined that the election is favorable, he proceeds with confidence (II, 74 ff.).

The "weder," then, simply becomes in the *Troilus* an aspect of the wheel of Fortune as it is witnessed in the movement of the celestial sphere. When the "election is favorable," whether it be with respect to the "weder" or to the heavens, conditions become opportune for change. This change in the "weder" is quickly brought about by Chaucer. We are told

> In May, that moder is of monthes glade,
> That fresshe floures, blew and white and rede,
> Ben quike agayn, that wynter dede made,
> And ful of bawme is fletyng every mede;
> Whan Phebus doth his bryghte bemes sprede,
> Right in the white Bole, it so bitidde,
> As I shal synge, on Mayes day the thrydde,. . .

The contrast between this stanza and the first of Book II is startling. We have moved, as it were, from "Owt of thise blake wawes" to "saylle" in "May, that moder is of monthes." But least we think that Troilus' deep woe has vanished we are quickly told that

> Now myghte som envious jangle thus:
> "This was a sodeyn love; how myght it be
> That she so lightly loved Troilus,
> Right for the firste syghte, ye, parde?"
> Now whoso seith so, mote he nevere ythe!
> For every thyng, a gynnyng hath it nede
> Er al be wrought, withowten any drede.

However, before slight beginnings (Troilus' love) may come to full completion the stars must be favorable.

> And also blisful Venus, wel arrayed,
> Sat in hire seventhe hous of hevene tho,
> Disposed wel, and with aspects payed,
> To helpe sely Troilus of his woo,. . .

Criseyde, having been approached by her uncle, Pandarus, of the love Troilus bears for her, begins to question what she should do, whether or not she shouldn't have some fun, and, if so, if she is able to preserve her honor and her name, whether or not there is any harm or blame to her loving Troilus. It is at this point, lines 764 through 770, that Chaucer interrupts Criseyde's questioning and suggests

> But right as when the sonne shyneth brighte
> In March, that chaungeth ofte tyme his face,
> And that a cloude is put with wynd to flighte,
> Which oversprat the sonne as for a space,
> A cloudy thought gan thorugh hire soule pace,
> The overspradde hire brighte thoughtes alle,
> So that for ferre almost she gan to falle.

As Troilus' passions have been portrayed in terms of black "weder," of tempests and storms, so too, Nature is changeable for Criseyde, for "A cloudy thought" began to "overspradde" across her "soule" or heart. Criseyde thinks that

> "For love is yet the mooste stormy lyf,
> Right of hymself, that evere was bigonne;
> For evere som mystrust or nice strif
> There is in love, som cloude is over that sonne.
> Therto we wrecched wommen nothing konne,
> Whan us is wo, but wepe and sitte and thinke;
> Oure wrecche is this, oure owen wo to drynke.

However, it is not until Book III that Troilus and Criseyde are able to consummate their love. Essentially, then, Book's I and II establish the tenets of courtly love in terms of each lover's passions with respect to "storm imagery," Nature, or, more broadly speaking, the wheel of Fortune as it is evidenced in the heavens.

In Book III, however, Troilus and Criseyde's consummation of their love is, in part, brought about by the machinations of Pandarus. Yet it is not entirely due to Pardarus' "scheming" that the lovers are able finally to meet. In part, their union is brought about by Fortune and Destiny. We are told at the beginning of Book III that

> O blisful light, of which the bemes clere
> Adorneth al the thridde heven faire!
> O sonnes lief, O Joves doughter deere,
> Plesance of love, O goodly debonaire,
> In gentil hertes ay redy to repaire!
> O veray cause of heele and of gladnesse,
> Iheryed be thy myght and thi goodnesse!

As Professor Root is quoted as having written in Curry's essay

> For any question concerning love, the astrologer inquires what planets are at the moment in the seventh house, which 'gives judgment of marriage and all manner of love-questions." A malefic planet—Saturn or Mars—in the seventh house causes ill fortune inlove. But Venus is a benefic planet, and especially concerned with affairs of love. Venus in the seventh house marks a very propitious hour.

The point, then, in the preceeding stanza is that, as we find out specifically in the seventh stanza of Book III's "Incipit prohenium tercii libri," Venus is the "blisful light, of which the bemes clere." The wheel of Fortune, the workings of Destiny, the heavens, all are propitious for the consummation to be conjoined. The actual setting for the union of Troilus and Criseyde is framed by the "rains of heaven."

> The bente moone with hire hornes pale,
> Saturne, and Jove, in Cancro joyned were,
> That swych a reyn from heven gan avale,
> That every maner womman that was there

Hadde of that smoky reyn a verray feere;
At which Pandare tho lough, and syde thenne,
"Now there is tyme a lady to gon henne!...

Or, as Pandarus himself informs us "Heren noyse of reynes nor of thonder?/By God, right in my litel closet yonder." Chaucer, two stanzas later, further comments "And evere mo so sterneliche it ron,/And blew therwith so wondirliche loude,..." Troilus' entrance into Criseyde's chamber is "covered" by "The sterne wynd so loude gan to route/That no wight oother noise myghte here." The "storm" with its wind and rain clearly prefigures, then, the final consummation of Troilus' passion. The dawn-poem or aube, then, is carefully presaged by the imagery of storms. Following the aube, Troilus in his song tells us

"That that the se, that gredy is to flowen,
Constreyneth to a certeyn ende so
His flodes that so fiersly they ne growen
To drenchen erthe and al for evere mo;
And if that Love aught lete his bridel go,
Al that now loveth asondre sholde lepe,
And lost were al that Love halt now to-hepe.

The principle which is proposed here is that love is destined. It is simply a matter of the nature of things. Man is destined to love. This we find out early in Book I (I, 214-266) when Chaucer philosophizes on the power of Love. Yet in terms of the "storm imagery" of the poem, this stanza marks the specific completionof the use of that imagery to presage a specific type of victory—Troilus' attainment of the sensual love object, Criseyde. Chaucer, immediately following this stanza, returns us to the larger background of the seige of Troy with its ominous forebodings of more tragic times to come—the fall of Troy, Troilus' betrayal by Criseyde, and the triumph of Chaucer's poem in showing us that the greatest victory does not lie in courtly love but rather in the love of Christ.

SEX AS A VARIABLE IN ATTITUDE CHANGE

by JEFFREY MUTNICK*

Society imposes roles which have been handed down, mother to daughter; father to son, which often reflect the economic realities of the times. In the Middle Ages, when women had ten children of which three survived, women were encouraged to marry early, stay at home, and bear children. Today, when both parents are needed to support any family unit, the stigma of a working mother slowly disappears.

The mass media, and in particular advertising, is one of the main ingredients in determining how men and women react the way they do. The various forms of the media prey upon men's and women's basic emotional needs; the desire for affection, the desire for emotional security, and the desire for personal significance.

Our sexual attitudes are learned through parental relationships, peer group pressures, and educators. Individuals tend to mass their behaviors through their lives into certain patterns which are characteristic of their beliefs, attitudes, and opinions, as well as other personality characteristics in order to conform to those people who have a direct influence on their lives.

The issue of whether men or women are more adept and and/or susceptible to persuasive appeals has long been a subject of speculation and, more recently, scholarly research. The multitude of variables involved in any persuasive situation makes definitive conclusions difficult, but the issue is provocative enough to warrant our continuing search for some answers.

When an individual is stimulated sexually, a promise is implied that should the individual change his opinion or act in a certain way any tension that may have been built up will be released through some provisional form of sexual satisfaction. In other words, human attentionis quickly diverted from almost any other focus of interest to a sexual attraction. Eye contact plays an important role in this sexual stimulation as was evidenced through a study conducted by Franklyn S. Haiman[1] where he proved that when a man and a woman are both persuaders and have established high ethos (good credibility), the woman, based on physical attractiveness, will effect a greater shift of attitude change than the man.

If one wishes to take a biblical slant to the power of sexual persuasion, all he need do is look to Adam and Eve and that glorious piece of

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*Assistant Professor of Speech, West Georgia College.

[1] Franklyn S. Haiman, "An Experimental Study of the Effects of Ethos in Public Speaking", *Speech Monographs,* XVI (1949), pp. 190-202.

forbidden fruit and wonder 'who did what and to whom?' But the question remains: Who is more persuadable? Is it the man or the woman? Factors which relate to an individual's answer include his marital status, his pride, and his prowess with the opposite sex.

After all, in our culture, isn't man the seducer, and the woman the one being seduced? Scheidel,[2] Whittaker,[3] Paulson,[4] Furbay,[5] Sikkink,[6] and Carment, *et. al.*[7] found that women are more persuadible than men. When we speak of women being more persuadible, we are referring to the average woman. This does not mean that men cannot be persuaded for in the Haiman[8] study, men preferred women speakers to men speakers, based on physical attractiveness, but each equally competent speaker yielded the same amount of attitude change.

Yet our culture has dictated that in the world of business, the man is the superior specie, for it is he who does the greater amount of selling, not the woman. Whittaker[9] demonstrated this principle when he tested judgments made by both sexes. In the experiment, each subject made a series of twenty judgments. The subjects returned twenty-four hours later to be retested along with a second subject. The second session was divided into four groups each headed by a control confederate: M-M, M-F, F-F, F-M. Data revealed that males had a greater persuasive effect than females in persuading the original subjects to change their original judgments.

But our society has trapped men. The need to succeed or to prove one's worthiness has become the male's aim in life. Carmichael[10] studied groups of men and women and discovered that when either sex was threatened with the failure to succeed, it was the man who became more frustrated than the woman. After all, the woman can always find a hus-

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[2] Thomas M. Scheidel, "Sex and Persuasibility", *Speech Monographs,* XXX (1963), pp. 353-358.

[3] James O. Whittaker, "Sex Differences and Susceptibility to Interpersonal Persuasion", *Journal of Social Psychology,* LXVI (1965), pp. 91-94.

[4] Stanley F. Paulson, "The Effects of the Prestige of the Speaker and Acknowledgement of Opposing Arguments on Audience Retention and Shift of Opinion", *Speech Monographs,* XXI (1954), pp. 267-271.

[5] Albert L. Furbay, "The Influence of Scattered Versus Compact Seating in Audience Response", *Speech Monographs,* XXXII (1965), pp. 144-148.

[6] Donald E. Sikkink, "An Experimental Study of the Effects of the Listener of Anticlimax Order and Authority in an Argumentative Speech", *Southern Speech Journal,* XXII (1956), pp. 73-78.

[7] D. W. Carment, F. S. Schwartz and C. G. Miles, "Participation and Attitude Change as Related to Cohesiveness and Sex to Subjects in Two-Person Groups", *Psychological Reports,* XIV (1964), pp. 694-702.

[8] Haiman, *ibid.*

[9] Whittaker, *ibid.*

[10] Carl W. Carmichael, "Frustration, Sex and Persuasibility", *Western Speech,* XXXIV (1970), pp. 300-307.

band to take care of her. She can always lean on the man, but the man must be able to provide for that woman and it is that situation which causes the frustration.

One's parents, peer group, and/or television, for that matter, instill upon children that there are various roles in life that they must pursue and achieve. To some extent, women are resigned to the role of homemaker (although that role is slowly changing) and the men must go out and earn a living. The man is considered the more dominant, and therefore, the woman should 'never' attempt to do what a man does, for she can never do his job as well as he. Miller and McReynolds[11] studied the persuasive effects between a male speaker and a female speaker after having established their credibility as both speakers holding a Ph.D. in nuclear physics. In this study, the male speaker was rated as the more competent of the two speakers. Unfortunately, the topic under discussion was that of an expanded ABM missile system (a field where many knowledgeable women just do not exist), and one wonders what the results might have been if the discussion had centered around dietetics or child psychology.

Haiman[12] and Paulson[13] approached this subject from different perspectives and questioned whether both sexes with high established ethos would be more persuadible than both sexes with low established ethos. The experiment revealed that this was the case, and therefore might be interpreted that if two high ethos sources are opposing each other (one male and one female); the male will be more persuasive (have a greater persuasive effect), but if both high ethos sources are opposing low ethos sources, both male and female high ethos sources will be more persuasive.

Many individuals have either used or thought of using the expression 'she's a typical dumb broad' at one time or another. Television reinforces this belief through the character portrayed by Lucille Ball. According to 'Lucy,' being a scatterbrain is normal. One laughs at Lucy's not realizing that she is reinforcing the stereotype that women are less intelligent than men. Paulson,[14] Sikkink,[15] and Scheidel[16] discovered that in communication situations, women retained less content than did men; therefore, can one assume that the average female scatterbrain cannot remember things?

Another stereotype that has fostered itself upon society is that of the 'talkative woman.' Whenever we refer to conversation, we think of

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[11] Gerald R. Miller and Michael McReynolds, "Male Chauvinism and Source Competence", *Speech Monographs,* XL (1973), pp. 154-156.

[12] Haiman, *ibid.*

[13] Paulson, *ibid.*

[14] Paulson, *ibid.*

[15] Sikkink, *ibid.*

[16] Scheidel, *ibid.*

a woman spending long hours on the telephone; over at a neighbor's spending the entire morning gossiping about Miss X and her affair with Mr. Y across the street. Yet, when we think in terms of male talkativeness, we picture a man being quite curt on the telephone, rarely gossiping with his male friends, and, in short, most closed-mouthed. Carment, *et. al.*[17] discovered that this situation is not true. When presented with a situation wherein men felt a need to form a basis for communication with another human being, the men will always take the initiative and try to establish a common ground or basis for their being together.

Let us now extract the various conclusions from this discussion and see where we stand: 1) men prefer women speakers to men speakers; 2) women are more persuadible than men; 3) men are better persuaders than women; 4) men are more easily frustrated than women; 5) men speakers are rated as more competent than women speakers; 6) high ethos male and female speakers are more persuasive than low ethos male and female speakers; 7) a high ethos male speaker will obtain a greater shift of opinion than low ethos female and male speakers; 8) women retained less content than did men; and 9) men speak more than women.

Some general assumptions can be charted from these various conclusions regarding speakers and listeners in a persuasive situation:

MALE SPEAKER
(with high ethos)
is considered to be a hard sell (will to succeed)
will effect greater change over low M/F speaker
will persuade more women than men
is considered more competent
will speak longer

FEMALE SPEAKER
(with high ethos)
is preferred by male listeners
will need to exert her competency
will effect greater change over low M/F speaker

MALE LISTENER
will consider a male a more competent speaker than a female
will be persuaded more by a high ethos M/F speaker
is more easily frustrated than a female listener
will retain more speech content than a female
not as easily persuaded as a female listener
prefers female speakers, but will probably
be persuaded by a male speaker

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[17] Carment, Schwartz, and Miles, *ibid.*

FEMALE LISTENER

is more persuadible than a male listener
prefers a male speaker over a female speaker
is not as easily frustrated as a male listener
will retain less of the speech content than males
will be persuaded more by a high ethos M/F speaker
will consider a male a more competent speaker than a female

Karlins and Abelson[18] remark that most experimental studies supporting sex differences in persuasion deal with topics of minor relevance and are usually in controlled laboratory situations, and that in the 'real world' a woman may not be as easily persuaded as she was in the psychological experiment. After all, could the same fellow who persuaded her to change her opinion regarding the distance between two light bulbs also persuade her with as much ease to go to bed with him? Probably not!

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[18] Marvin Karlins and Herbert I. Abelson, *Persuasion,* New York: Springer Publishing Co., 1970, p. 91.

ABSTRACTS OF MASTER'S THESES AND SPECIALIST IN EDUCATION PROJECTS

Baker, Richard F., (Specialist in Education, Administration and Supervision, December, 1977)

A STAFF DEVELOPMENT PROGRAM ON TORT LIABILITY FOR THE CLASSROOM TEACHERS AT MARIETTA JR. HIGH

It was thought important to present a staff development program on tort liability for the classroom teachers at Marietta Jr. High. Since litigation in the areas of corporal punishment and supervision were the critical areas for classroom teachers, the program was limited to those two subjects.

The staff development program was devised for presentation during a one day session. The program was divided into three parts. The first part included a general introduction to tort law as it pertained to corporal punishment and supervision. The second segment of the program was used to acquaint the teachers with basic legal vocabulary and the specific laws relating to corporal punishment and supervision. The final portion of the program was spent in reviewing and critiquing recent cases involving both corporal punsihment and supervision.

Barron, Miller L., (Specialist in Education, Administration and Supervision, December, 1977)

A GENERAL ORIENTATION PROGRAM FOR FIRST-YEAR SECONDARY TEACHERS EMPLOYED BY THE COBB COUNTY PUBLIC SCHOOL SYSTEM

The purpose of this project was to design an orientation program of a generalized nature for first-year teachers employed in the secondary schools of the Cobb County Public School System. It was assumed such an orientation would prove beneficial to the total school system in general and to the first-year teachers in particular. It was further assumed that appropriate orientation of the first-year teacher was both an essential and indispensable aspect for the successful operation and function of the Cobb County Public School System. Topics covered included the areas of administration, personnel, pupil personnel services, and instruction. Although this program dealt specifically with the first-year teachers; i.e., those teachers who had no contractual teaching experience, it may be adapted and modified to include experienced teachers who become employees of the Cobb County Public School System.

Baxter, Michael A., (MA, English, December, 1977)

THE SOCIAL COMMENTARY IN SINCLAIR LEWIS'S SHORT STORIES

The short stories of Sinclair Lewis cover a wide range of subject matter and form a social commentary on American society in the first half of the twentieth century. Although Lewis's novels also form such a commentary, the stories have a special significance because they often display more views of a specific topic than do the novels. This thesis is an attempt to demonstrate that through his stories Lewis has left a record of the diversity of the daily lives of his contemporaries which can be of great value to anyone studying that period.

For example, love and marital relationships are themes presented in many of the stories. But rather than producing a stereotype of the relationships between men and women during courtship and marriage, Lewis shows characters involved in stagnant, deteriorated, mature, and supportive relationships and in other relationships which do not fit these categories. Overall, Lewis displays a wide range of types of relationships between lovers and between spouses.

Lewis presents a similar assortment of views of business, intellectualism, and middle-class styles of life. The businessmen in the stories range from young salesmen to tycoons, from lawyers to embezzlers, and from fake religious prophets to ethical shopkeepers. Some housewives, priests, businessmen, and farmers exhibit a concern with intellectual matters, but others are contemptuous of learning and culture. Yet whatever subject is the primary concern of an individual story, scattered throughout that work will be bits of information describing the daily lives of Americans. There is information about such diverse subjects as social clubs and intellectual groups, about business practices, about home life, and about fads. Lewis's short stories contain much valuable information about the contemporary times of which he wrote.

Blackwell, Joe. (Specialist in Education, Administration and Supervision, August, 1977)

GOAL PRIORITIES AND ASSESSMENT BY DEPARTMENTS AT ETOWAH HIGH SCHOOL

Seven departments and a minimum of twenty-five percent of the students enrolled in each department participated in this study to ascertain priorities and to assess the extent to which goals were being attained. The teachers in each department ranked departmental goals and evaluated the efforts given toward their attainment using instruments patterned after those developed by Phi Delta Kappa's Commission on Educational Planning. Then students in classes selected at random evaluated efforts given toward the attainment of goals.

The data from students and teachers were treated separately. A mean and standard deviation for each departmental goal was determined using teacher evaluations and then a mean score and standard deviation was determined using student evaluations.

An analysis of the data collected in this study showed that some departments at Etowah (Trades and Industry, Business, and Physical Education) were perceived as doing a better job of attaining goals, by both teachers and students,

than other departments. All departments were perceived as having room for improvement in attaining one or more goals. These and other findings will be used in an effort to upgrade the quality of education at Etowah High School.

Brooke, Vida H., (Specialist in Education, Guidance and Counseling, March, 1978)

THE EFFECT OF ACTIVITY GROUP COUNSELING ON SIXTH GRADE STUDENTS' SELF-CONCEPT

An activity group counseling project was carried out at Garrett Middle School, located in Austell, Georgia. Eight girls were randomly selected from a total of thirty-one in one sixth grade pod. The group met for nineteen, thirty minute sessions. The Piers-Harris Children's Self-Concept Scale was administered as a pretest and a posttest and compared to measure the effectiveness of the activity group on the students' self-concept. There was no significant difference in the scores.

Brown, Joan J., (Specialist in Education, Administration and Supervision, December, 1977)

A STUDY OF THE FULTON COUNTY ATTENDANCE POLICY AND ITS EFFECT ON SECONDARY SCHOOL ATTENDANCE IN THE SYSTEM

Fulton County Board of Education approved an attendance policy in 1974-75 to limit absences of high school students and thus improve average daily attendance (ADA), a basis of state funding to the system. Anticipated results were added revenues and reemphasis of the importance of classroom participation. Informational preparation combined with adequate implementation planning and deliberate follow through enabled the high schools to handle increased paper work and record keeping. Historical data of attendance records and reports were studied and comparisons made of results prior to and since implementation of the policy. Results indicated that student attendance in the system improved most sharply in the first year of the policy and increased each year since 1973-74. Added funding resulted from increased ADA; students who violated regulations of the policy lost credit, ranging from five to thirty hours; and fewer dropouts were reported each year.

Chappell, Myline W., (Specialist in Education, Elementary Education, August, 1977)

THE USE OF THE CLOZE PROCEDURE WITH SIXTH GRADE STUDENTS TO EVALUATE THE APPLICABILITY OF FOUR READABILITY FORMULAS TO THE GEORGIA CHILDREN'S BOOK AWARD WINNERS

A study was conducted to determine the relationship between cloze test scores and the degree to which students' reading levels match the readability

level of books, as reflected by each of the four selected readability formulas. The following formulas were applied to passages in books which have won the Georgia Children's Book Award: the Dale-Chall formula, the Fry readability graph formula, the Raygor readability estimate formula, and the SMOG grading formula. Reading grade levels were determined by the students' levels in the *Scott Foresman Reading Systems.*

The subjects of this study were sixth grade students. A stratified random selection process was used to select thirty subjects for each book. Students were given cloze tests on each of the eight selected books which they had never read or had never heard read aloud.

The correlation between the cloze test scores and the formula grade level estimates in relation to the students' reading grade levels was accomplished by use of the Pearson product-moment correlation. The null hypotheses were rejected at the .01 level of significance.

Although all four formulas show a significant correlation with cloze test scores in relation to the students' reading grade levels, both the Fry and Raygor formulas correlate significantly higher than the Dale-Chall and SMOG formulas.

Collins, Jackie R., (Specialist in Education, Administration and Supervision, August, 1977)

A CASE STUDY OF COMMUNICATIONS FLOW AND THE MANAGEMENT IMPLICATIONS—ARMUCHEE SCHOOL

A questionnaire was adapted from one previously established by Karlene H. Roberts and Charles A. O'Reilly III (1974). The questionnaire was designed to assess openness, accuracy, direction, and satisfaction with the communications in a school setting.

The problem of the study was to identify, measure, and analyze the communication flow within Armuchee School, and to design or recommend tactics to help facilitate communication.

The reliability of the various test questions was established by Roberts and O'Reilly, and there was apparent face validity during the development of the questionnaire.

The mean scores of respondents with subordinates and those without subordinates were compared and a pattern seemingly developed concerning the variations of responses on several questions contained in the questionnaire. Recommendations and further study were included.

Cowan, Deborah L., (Specialist in Education, Elementary Education, December, 1977)

AN EXPERIMENTAL METHOD OF TEACHING READING TO TITLE I STUDENTS WHICH EMPHASIZES THE ENHANCEMENT OF THE SELF-CONCEPT BY MEANS OF A SYSTEMATIC APPROACH

This study was undertaken to determine if students enrolled in a Title I remedial reading program who were taught reading by an experimental method

which emphasized the enhancement of the self-concept could significantly improve their reading skills. The problem of this study was to determine: (1) if self-concept could be significantly improved, (2) if reading gains could be significantly improved, (3) if there was a positive correlation between changes in self-concept and reading gains, and (4) if there was a positive correlation between one's self-concept and his reading gain. Thirty-one subjects from Model Elementary School in the Floyd County School System participated. There were thirteen girls and eighteen boys, all of whom were Caucasian.

The *Piers-Harris Children's Self-Concept Scale* was administered to the subjects at the beginning and end of the 1976-1977 school term in order to measure changes in self-concept. The total reading score of the *Comprehensive Tests of Basic Skills* was used to determine each year's growth of the subjects from the beginning of their school career until the end of the 1976-1977 school term. The teaching technique used in this study was based on the ideas of Purkey (1970) in his book *Self-Concept and School Achievement.* These six factors served as guidelines for developing the kinds of activities necessary for improving the self-concept: (1) Challenge, (2) Freedom, (3) Respect, (4) Warmth, (5) Control, and (6) Success. Examples of activities included: (1) birthday cakes, (2) activities with video taping, and (3) learning activities at a level which guaranteed success.

The results of this study, tested at the .10 level of significance, were as follows: (1) the total self-concepts of the subjects were significantly improved, (2) reading gains improved with significance at the .001 level, (3) there was a significant positive correlation between changes in self-concept and reading gains, and (4) there was a positive correlation between self-concept, post test results, and 1977 reading gains, but the correlation was not significant. These findings indicate that a teaching technique designed to improve the self-concept will also significantly improve reading gain.

Daniel, Wanda R., (Specialist in Education, Business Education, December, 1977)

THE PREPARATION AND EVALUATION OF ECONOMICS MATERIALS FOR TEACHING THE MARKET SYSTEM

The Problem

The problem of this study was threefold: To identify specific economic and business terms which serve as background information for all economic study; to prepare materials which are simple and interesting enough for the majority of students to understand and hopefully enjoy; and to evaluate the usefulness of the materials prepared.

Procedures

Preliminary steps in the preparation of the study were: (a) to determine the economic concepts which should be emphasized, (b) to determine the objectives of each project, (c) to determine the means by which concepts can be taught, for example, skits, graphics, and poems, (d) to produce the graphics, recordings, and skits, which relate to the objectives of the study, (e) to select a panel of experts to evaluate the materials, (f) to produce an evaluation instrument and to tally the scores of the panel.

The market system was selected as the area to be emphasized in the study because it is a concept which includes terminology and theory basic to all other economic understanding. The skits, drawings, and recordings were prepared to capture student attention and to make learning more enjoyable. A panel of thirteen selected business and economic educators were chosen to evaluate the effectiveness of the teaching materials. The panel rated the material in four areas: Usefulness, clarity, creativity, and accuracy of information.

Conclusions

The following conclusions were drawn as the result of the study:

1. Economic concepts can to varying degrees be integrated into all business and office education courses.
2. Students appear to enjoy learning more when they have a part in the preparation of their learning materials.
3. Activities ranked highest by the panel of experts were the shortest, had the fewest economic or business concepts embodied in their content, and included the most visual and audio assistance in their presentations.

Davis, Jimmy L., (Specialist in Education, Secondary Education, December, 1977)

AN OUTLINE FOR THE THREE REQUIRED COURSES IN SEVENTH GRADE SOCIAL STUDIES FOR THE ROME CITY HIGH SCHOOLS

The purpose of this project was to provide a resource guide for junior high school teachers in the Rome City System to use in teaching the three required courses in seventh grade social studies—Physical Geography, World Culture, and Civics.

Following a research of the literature dealing with social studies curriculum planning and implementation on the junior high level, course content for the three required courses in seventh grade social studies was researched and developed.

Preceding the content section of each course was a philosophy and a list of primary objectives. Following the content section were suggested activities, suggested materials and resources, and a bibliography for the teacher.

Data was gathered from selected persons with some expertise in social studies on their level of agreement or disagreement with the guide.

Conclusions reached as a result of this study indicated: (1) that the guide be adopted for use in the Rome City School System, (2) that an effort be made to provide curriculum guides to teachers in all subjects, and (3) curriculum guides be continuously updated and revised.

Fleury, Mabel L., (MA, Psychology, August, 1977)

HUMAN GROWTH AND POTENTIAL FOR DISADVANTAGED ADULTS

Most books and manuals for human growth and potential address themselves to the educated middle class. There is a great need for those disadvan-

taged adults to have the opportunity to examine, identify, and utilize their strengths to move towards their potentialities, so that they may lead more autonomous, active, responsible, purposeful and fulfilling lives. Self actualization needs not be a luxury of the middle class.

This training module enables the facilitator to help the students explore eight areas that would enhance their growth and potential: 1) Talking About Myself (personal disclosure); 2) Listening With Feeling and Understanding (effective communications); 3) What Do I Believe? (value clarification); 4) What Do I Need? (needs assessment); 5) I'm O.K., You're O.K. (strength assessment); 6) The "WOW" Feeling (peak experiences); 7) What's Stopping Me? (blocks to growth and potential); 8) What Can I Do About It? (behavioral contracting).

The workshop format includes: 1) Discussion of Concept; 2) Objectives of the Concept; 3) Activity for Student and Facilitator Participation; 4) Problems Peculiar to the Disadvantaged Adults in the Activity.

All presentations are geared towards the social, economic, and educational experiences of the disadvantaged adults.

A bibliography is also provided for further explorations into human growth and potential.

Harris, Lucian, (Specialist in Education, Administration and Supervision, June, 1978)

IMPROVING PUBLIC RELATIONS AT MARIETTA JUNIOR HIGH SCHOOL

It was thought important to develop a professional guide on public relations for the faculty and administrative staff at Marietta Junior High School. The problem was to examine the following relationships between the home and the school as they relate to the progress of the student:

1. The student as a reporter of his school.
2. Homework as a public relations tool.
3. Parent-teacher conferences.
4. Telephone contacts with the home.
5. The involvement of administrators in explaining the policies and practices of the school.

These relationships were examined through large and small group discussions with the faculty and administrative staff. From these discussions, a questionnaire was designed and distributed to the faculty and administrative staff. The results were compiled and analyzed. They provided the basis for the small group discussions and recommendations from the faculty and administrative staff as to ways of improving public relations at Marietta Junior High School.

Hartman, Joseph E., (MA, Psychology, August, 1977)

THE JUVENILE JUSTICE SYSTEM: A VIEW FROM WITHIN

This thesis is an attempt by the author to describe the juvenile justice system from a historical, a personal and an experiential point of view. It is to a large

degree autobiographical and explains how the author became involved with the juvenile justice system and why, after several years, he felt obligated to leave. Also depicted are the various subsystems and the procedures by which kids are "processed." Present concerns with juvenile crime and the inadequacies and injustices of the juvenile justice system are shown to mirror similar concerns to those at the turn of the 20th century. Although no specific solutions are offered, some existing alternatives are discussed. The author's basic point, however, is that no system by itself can solve the juvenile crime problem. He feels that crime is symptomatic of underlying community problems which need to be dealt with by the individuals making up the community. As long as the problems precipitating the crime continue to exist, so will the crime itself.

Houston, Larry M., (Specialist in Education, Administration and Supervision, August, 1977)

A CASE STUDY OF THE COOPERATIVE PURCHASING SYSTEM IN THE PIONEER COOPERATIVE EDUCATIONAL SERVICE AGENCY IN THE STATE OF GEORGIA

The Pioneer Cooperative Education Service Agency as a purchasing cooperative exists to provide the ability for small school systems who are members of the agency to gain the benefits of volume purchasing. The purpose of this paper is to investigate the cooperative purchasing system used by the Pioneer Cooperative Education Service Agency (CESA) and to examine its benefits and problems to include specification development, bidding procedures, and purchasing power.

To complete the stated objective for the study, the following plan of work was followed. A review of the literature was conducted with the following areas reviewed: school purchasing principles and procedures and public school cooperative purchasing. A study of the background of the Pioneer CESA was conducted following several selected characteristics. The characteristics investigated included the purchasing power, organizational structure, specification development, bidding procedures, and procedures for handling purchase orders, payment, and delivery of items purchased by the Pioneer CESA.

The information obtained for the investigation of the Pioneer CESA as a cooperative purchasing system was primarily through personal interviews, the use of an interview guide, telephone conversations, and procurement of printed matter on the Pioneer CESA. During the investigation, several benefits of the Pioneer CESA were examined as well as some problems discovered.

The findings of this case study were based on the benefits and problems presently provided by the structure and development of the Pioneer CESA in the state of Georgia.

Findings from the study included:

1. The Pioneer CESA as a purchasing cooperative was organized under a written set of policies and procedures.
2. Within the Pioneer CESA, each member system had input in the cooperative purchasing process.
3. Accurate records were kept by the Pioneer CESA to show savings realized by the cooperative purchasing system.

4. The Pioneer CESA as a purchasing cooperative was effective in meeting the demands of a public school purchasing cooperative such as obtaining the maximum value of the expenditures at the lowest cost.
5. Purchasing power was increased for the systems by the use of the Pioneer CESA purchasing cooperative.
6. An annual evaluation of the Pioneer CESA was conducted.
7. Developing unified specifications desired by the participating school systems in the Pioneer CESA was somewhat of a problem.

Jennings, James C., III, (Specialist in Education, Administration and Supervision, August, 1977)

DEVELOPMENT OF A ROLE-ASSESSMENT MODEL OF TIME USE FOR THE ROLE OF ASSISTANT PRINCIPAL

The purpose of this study was to formulate a self-assessment model of time use to be used by persons in the role of assistant principal. A chronological log was kept for two weeks to define an exact record of daily activity, contact and communication. A questionnaire sampling of Coweta County school administrators was used to determine the roles of an assistant principal. The results of the chronological log were charted according to amount of time spent in each role, amount of time spent in face to face contact, mail processing and telephone communication. The percentage of time spent with students, parents, teachers and staff was determined. Correlations were made to evaluate the results of the survey given to Coweta County administrators.

Spearman's Rank Order Correlation of Coefficient Formula was used to compare the actual amount of time spent in each role with the concept of its importance, the amount of self satisfaction in the role and the preparation for the role.

It was found that the major role in regard to time consumption was that of monitor. However, the role of liaison was considered by the administrators surveyed to be the most important role. The vast majority of contacts were face to face contacts, with students accounting for the highest percentage (28.4%). There was found to be no statistically significant correlation between the surveyed view of the roles and the actual practice of the role by the assistant principal.

Krieger, Alan P., (Specialist in Education, Elementary Education, June, 1978)

A COMPARISON OF READING ACHIEVEMENT RATES OF SLOW READERS IN SMALL AND LARGE CLASS INSTRUCTION AT CENTRAL PRIMARY SCHOOL IN 1977-1978

This investigation was designed to determine the effect of class size on the rate of reading achievement of below average readers in the third and fourth grades. Two different studies were implemented for this purpose.

The first study involved a comparison of reading achievement over a five month period. All of the third and fourth grade students at the test school with below grade level basel reading levels were used. Each grade had two five stu-

dent experimental classes. The third grade control class consisted of 21 students. The fourth grade had a control class of 23 students.

The second study was conducted to determine the effect of class size on one fifteen minute instructional period. Forty-two fourth grade students were used in this study. They were randomly divided into two experimental classes of five students and one control class of 32 students.

There were three hypotheses used to determine the significance of this study. The hypotheses are as follows:

First Hypothesis

At the end of this study, the third grade small experimental classes will not show a significantly greater rate of achievement in reading than the third grade large control class over a five month instructional period.

Second Hypothesis

At the end of this study, the fourth grade small experimental classes will not show a significantly greater rate of achievement in reading than the fourth grade large control class over a five month instructional period.

Third Hypothesis

At the end of this study, the fourth grade small experimental groups will not show a significantly greater proficiency in a specific reading skill than the fourth grade large control group after one fifteen minute instructional period.

A pretest — treatment — post test control group design was used for all of the experiments. Because of differences in reading ability, an analysis of covariance was used to treat the data with pretest scores as the covariate. The results of the first hypothesis approached significance, but was not significant at the .05 level of significance. The second and third hypotheses did not approach significance. Therefore, class size was not shown to be a significant factor in the rate of reading achievement of below average readers in the third and fourth grades.

Lee, Jane, (MA, Psychology, December, 1977)

POLICE BEHAVIOR: A NORMAL ADJUSTMENT TO THE ENVIRONMENT

Compiled by a Police Officer, as well as graduate student, this thesis will deal with the heart of the police problem—the problem of personnel. It will summarize what is known about the police environment and sub-culture and consider the "normal adjustments" the officer makes in order to survive and function within this environment. Through an awareness of the stressors which affect the police officer daily, will the officer be able to cope and maintain mental stability.

Lickwar, Richard A., (Specialist in Education, Administration and Supervision, August, 1977)

A SYSTEMATIC APPROACH TO DECISION MAKING

The purpose of this work was to design a graduate level staff development unit dealing with the full scope of decision-making techniques and specifically attuned to those educational professionals whose mathematical background was minimal. A thorough review of decisioning techniques and problems was integrated with coverage of subsequent quantitative innovations. As a result, educators who are not analysts by training or inclination will be better prepared to communicate with those professionals trained in quantitative measures.

Miller, Mary J., (Specialist in Education, Early Childhood, August, 1977)

THE STUDY OF STUDENT EVALUATIONS OF THE EARLY CHILDHOOD EDUCATION GRADUATE PROGRAM AT WEST GEORGIA COLLEGE FROM AUGUST, 1976 THROUGH JUNE, 1977

The purpose of this study was to formally tabulate and assess all the student evaluations of the early childhood education graduate program at West Georgia College from August 1976 through June 1977.

Sixty-two questionnaire results were tabulated. The results showed that the students had positive attitudes towards the early childhood education graduate program at West Georgia College.

Moore, George R., (Specialist in Education, Administration and Supervision, August, 1977)

COMPARISON OF COEDUCATIONAL JUNIOR HIGH SCHOOL STUDENTS WITH NON COEDUCATIONAL JUNIOR HIGH STUDENTS RELATIVE TO THEIR ATTITUDES TOWARD THEIR LEARNING ENVIRONMENTS

This study was an attempt to determine what differences existed in students' attitudes toward their learning environments in four junior high schools in LaGrange and Troup County, Georgia. Six hundred nine subjects were administered the Learning Environment Inventory.

Five subscales of the LEI 1) cohesiveness, 2) friction, 3) democracy, 4) cliqueness, and 5) apathy were obtained for 609 subjects. There were 189 students in LaGrange Boys' Junior High, 99 in Eastside Girls' Junior High, 95 in Westside Girls' Junior High, and 226 in Troup County Junior High School. Five tables on analysis of variance were developed from the data for each subscale showing variance between groups, within groups and F ratio. Two additional tables showed mean rank by scale and school and mean and standard deviation by scale and school.

Data revealed that there were no significant differences in the attitudes of

students toward their learning environments in the four schools with the exception of Eastside Girls' Junior High and Troup Junior High School on the subscale cohesiveness. Eastside Girls' Junior High was more cohesive than Troup County Junior High School.

The following tentative conclusions were derived from data when mean scores were compared:

1. There was more apathy and friction at LaGrange Boys' Junior High School than the other three schools.
2. There was more cohesiveness and democracy at Eastside Girls' Junior High than the other three schools.
3. There was more cliqueness at Westside Girls' Junior High than at the other three schools.
4. There was less cohesiveness and friction at Troup Junior High than the other three schools.
5. There was less democracy and cliqueness at LaGrange Boys' Junior High than the other three schools.
6. There was less apathy at Westside Girls' Junior High than the other three schools.
7. The all boys' school was similar to the coeducational school on cohesiveness, democracy, and apathy.
8. The all girls' schools were similar to the coeducational school on friction and cliqueness.
9. The all boys' school was less democractic and cohesive than the all girls' schools.
10. The all girls' schools had more cliqueness than the all boys' school.
11. The all boys' school had more friction and apathy than the all girls' schools.

Parrott, David L., (Specialist in Education, Administration and Supervision, December, 1977)

A COMPETENCY BASED MANUAL FOR INSERVICE TRAINING OF COWETA COUNTY ELEMENTARY SCHOOL PRINCIPALS

The major thrust of this study was determined by the need for inservice training that would provide instruction in the competencies relative to the needs of the elementary school principal of Coweta County. Study of available literature revealed that: the principal occupies a pivotal position in relation to the success of his school; formal preparation is inadequate for the success of the administrator; an inservice training program could provide the administrator with a means to stay current with the changing needs of the school environment. The Coweta County school system has identified the following specific competencies for the principal's instruction: 1. develop skills in the Purdue method of classroom observation; 2. acquire knowledge of the typical behavior of elementary age students; 3. improve interpersonal communication skills, emphasizing conflict resolution and changing behavior. Through the evaluation of the evidence of this study, it was determined that a manual, designed specifically for the needs of the elementary school principal in Coweta County and based on

the three identified competencies, would provide a beneficial program of in-service training. The manual, which is included in the study, affords the participants an open ended guide by which he can progress according to his priorities and the particular demands of his school environment.

Price, Clay L., III, (MA, Psychology, June, 1978)

A SURVEY OF SOUTHERN BAPTIST ATTITUDES TOWARD THE ROLE OF WOMEN IN CHURCH AND SOCIETY

As effects of the Women's Liberation Movement spread to religious denominations, Southern Baptist churches have faced questions about women in the ministry. This paper examined Southern Baptist attitudes on acceptance of women in the pastorate, ordination of women to the ministry, the role of women in church-related work, and the role of women in business and politics. It was hypothesized attitudes would not differ significantly with respect to leadership status, age and sex, education, region of the country or support for women's rights.

A sample of 668 Southern Baptist pastors, Sunday School teachers, Woman's Missionary Union directors, and lay members were mailed a twenty-four item questionnaire designed to record dichotomous responses. The results of the 389 respondents were analyzed using chi square to determine significant relationships.

Overall, the respondents were supportive of women's roles in business, politics, and non-pastoral ministries. Less than 20 per cent of the total respondents were supportive of women in pastoral roles. Pastors were significantly less open to women in non-pastoral roles (religious education, youth work, and social ministries) than church members.

Education displayed a greater effect on attitudes than age. Significant differences between the responses of persons with less than a high school education and persons with more than a high school education were observed on eighteen of the twenty-four items. Persons with more education tended to be more supportive of women's roles outside the home.

Region of the country was associated with items on women's understanding of and vocal participation in politics and with an item that attitude change will occur in the future. Support for women's rights was associated with support for women in the ministry.

Two-thirds of the respondents expected attitudes toward women in the ministry to change within the next twenty-five years. If women continue to enter the ministry and if current trends in education, labor force participation and family patterns continue, it is likely that attitudes will indeed change to a more open acceptance of women in expanding roles.

Randall, Willie G., (Specialist in Education, Guidance and Counseling, August, 1977)

A STUDY OF THE VOCATIONAL AND EDUCATIONAL EXPERIENCES OF A GROUP OF 1973 HIGH SCHOOL GRADUATES

The purpose of this study was to assess the perceptions of a group of 1973 high school graduates about their high school course offerings as they related to career and post secondary school preparations. A questionnaire consisting of twenty-three questions and a letter stating the purpose of the study were mailed to all two hundred graduates of the class of 1973 during the fall of 1976.

Forty percent of the questionnaires were returned. The data was organized and tabularly arranged using numbers and percentage distributions. The results of the study indicate that the majority of the graduates did not perceive their high school courses as being very helpful in preparing them for the world of work. The responses from graduates who attended post secondary schools indicated that the high school course offerings did benefit them in preparation for post secondary education. There were indications, however, that the high school can make a greater effort in providing an adequate curriculum that will alleviate many of the difficulties experienced by the graduates in employment gratification and in post secondary education.

Roquemore, Aaron Q., (Specialist in Education, Guidance and Counseling, June, 1978)

A CONTRAST BETWEEN OFFENDERS AND NON-OFFENDERS IN THEIR FAMILY PERCEPTIONS

This research compared the family environment perceptions between individuals who are incarcerated in a penal institution and those individuals who comprised the normative sample of the Family Environment Scale. One experimenter, a Counselor at the Georgia Diagnostic and Classification Center, Jackson, Georgia tested eighty-three criminal offenders utilizing the Family Environment Scale, during a two week period. After that time, the program was discontinued.

The mean, standard deviation, and t-test for each of the two groups was computed. Analyzed difference between existing normative data developed by Rudolf H. Moos and that data developed by this investigator produced significant results at or beyond .05 level.

Scott, Charles W., (Specialist in Education, Administration and Supervision, June, 1978)

THE IOWA TEST OF BASIC SKILLS AS A NORM REFERENCED MEASURE IN PREDICTING READING ACHIEVEMENT ON THE GEORGIA CRITERION-REFERENCED TEST

The problem was to determine whether there was a positive coorelation between the Iowa Test of Basic Skills in language arts, including vocabulary,

word analysis, reading and spelling, at the third grade level and the Georgia Criterion-Referenced Test in reading at the fourth grade level.

Information was gathered to determine whether the Iowa Test of Basic Skills, level 7, form 6, used with third grade students at Compton Elementary School in Powder Springs, Georgia was a predictor of the Georgia CRT reading scores obtained by testing the same pupils as fourth grade students in the Spring of the following year.

Positive correlations at the .001 level of significance were shown by using the Pearson Product-Moment Correlation. Correlations of .61, .52, .54 and .47 were shown respectively between the vocabulary, word analysis, reading and spelling subtests of the ITBS and the Georgia CRT in reading.

The ITBS in language arts at the third grade level can be considered as a significant predictor of achievement on the fourth grade Georgia CRT in reading.

Overall the data would not suggest that the Georgia CRT be used to supplant the ITBS. However, as the different purposes of the two tests are considered, perhaps recognition of the significant correlations between the IBS subtests and the Georgia CRT could help teachers approach the Georgia CRT with some confidence as they plan instructional strategies and interpret the test results to parents.

Swantic, Frances M., (Specialist in Education, Administration and Supervision, March, 1978)

A COMPARATIVE STUDY OF THE TEACHER'S RETIREMENT SYSTEM AND THE EMPLOYEES' RETIREMENT SYSTEM OF GEORGIA

This study was concerned with the comparison, of benefits and provisions, of the Teachers' Retirement System with the Employees' Retirement System in the State of Georgia. To accomplish this, relevant literature and laws were reviewed and provisions were compared. The comparison consisted of the following areas: (a) membership eligibility, (b) administration, (c) creditable service, (d) employee and employer contributions, (e) retirement benefit formulas, (f) benefits and options, (g) vesting, (h) inflation protection, (i) disability benefits, (j) early retirement benefits, and (k) death benefits. The study concluded that disparities and inequities existed between the systems. Proposals were listed to correct imbalances found.

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